

Exhibit A

Part Two

217. Although there have been some new firms competing in the market, they have not become successful. As Dr. Reitman explained, “[t]hey are much less effective in the marketplace because they are not selling through their preferred distribution channel ... by not selling through the dealers, they cannot expand and grow and obtain the competitive significance that they would have had absent the dealer [restrictions].” Reitman Tr. 1537.

i. Heraeus Kulzer

218. Despite its earlier decision not to enter, Heraeus Kulzer started selling its mid-line tooth, Jeldent Basic, in the United States in January 2000. Becker Tr. at 1817-1818. Heraeus’s North American President Horst Becker views the U.S. market to be an attractive one due to the high prices in the market. Becker Tr. 1828-29. Prior to introducing Jeldent, Heraeus “absolutely” tried to obtain dealer distribution. Becker Tr. 1818. It approached “all major dealers, regional and dealers working throughout the country.” Becker Tr. 1819. Many of these dealers — including Zahn, Patterson, and Darby — already sell Heraeus’s operatory products, and their relationship with Heraeus is a good one. Becker Tr. 1821.

219. In response to its inquiry about these dealers selling its teeth, Heraeus received only the “cold shoulder,” which Heraeus understood to be because they were “not being able to take on our tooth line due to contract situations with Dentsply.” Becker Tr. 1818. As a result, Heraeus began selling teeth directly to labs. Becker Tr. 1823.

220. Heraeus has not achieved its sales objectives.

Heraeus's president, Horst Becker, believes his company would be able to reach its sales and market share objectives if it had access to a dealer network. Becker Tr. 1830.

221. Heraeus's market share is only about 1%. Reitman Tr. 1472; Marvel Tr. 3726. Its entry has had no discernable effect on Dentsply's monopoly power. Reitman Tr. 1688. In fact, one Dentsply sales rep believes that Heraeus's sales have come at the expense of other direct sellers, not Dentsply. Reitman Tr. 1688

Neither has it changed the composition of its teeth, introduced any new tooth lines, or changed its return policy. Jenson Tr. 2308. *See also* Weinstock Tr. 180 (Zahn has not observed any effect that Heraeus's entry has had on Dentsply's conduct).

ii. **Davis, Schottlander & Davis Ltd. ("Leach & Dillon")**

222. Davis, Schottlander & Davis Ltd. is an English company that sells a premium, Vita-shaded tooth under the brand name Enigma. It is distributed in the United States by Dillon Company, Inc. (sometimes referred to as "Leach and Dillon"). Dillon Tr. at 4079-80, 4086, 4088.

223. In 1998, Schottlander sought a means of distributing Enigma in the United States market. Dillon Tr. at 4080. Dillon's president, Kevin Dillon, advised Schottlander to distribute through laboratory dealers such as Henry Schein, Patterson, Atlanta Dental, and Darby. Dillon Tr. 4080. He gave that advice because "anything else is futile ... Those dealers

control the tooth industry. If you don't have distribution with the dealer network, you don't have distribution." Dillon Tr. 4081.

224. Mr. Dillon himself tried, but was unable, to persuade a lab dealer to stock and sell Enigma teeth, and he therefore agreed to distribute Enigma himself beginning in 2001. Dillon Tr. 4079-81, 4085-86 ("There was not a satisfactory prospect who would accept competing with Dentsply. No one would accept the challenge").

225. Dillon attempted to convince some dealers to provide very limited services, such as billing, for labs that wanted to buy Enigma teeth.

Indeed, Dentsply did consider this limited billing function to be a violation of Dealer Criterion 6. Jenson Tr. 2297.

226. As a result, Dillon is the primary distributor of Enigma teeth in the U.S. market. Dillon is a small, family business that operates "pretty much like a mom-and-pop operation." Dillon Tr. 4079. It does not have a sales force. Dillon Tr. 4082. Its catalogue is outdated and does not include any reference to Enigma teeth. Dillon Tr. 4082. Its president, Kevin Dillon estimated that Dentsply sells more teeth in ten minutes than his company does in a month, and likened his company to an "aphis" compared to Dentsply. Dillon Tr. 4084. *See also* Jenson Tr. 2301 (Dillon "a very small organization ... it's three people that we generally see out in the marketplace").

227. In 2001, in Enigma's first year in the United States, it achieved only \$21,278 in sales. Dillon Tr. at 4083. Dillon has succeeded in placing only one consignment with a

laboratory. *Id.* at 4081. Contrary to its initial goal of selling 400 sets of teeth per day, Dillon is selling only 600 sets per month (or roughly 20 per day). Dillon Tr. at 4094-95.

228. Dillon was able to convince Lincoln Dental, a lab dealer located in Cherry Hill, New Jersey, to sell, but not stock the Enigma tooth. DiBlasi Tr. 2756-58, 2785-86. Even Lincoln's Jeff DiBlasi acknowledged Dillon's troubles in getting wider dealer distribution:

[T]he main reason I think that Leech & Dillon has come to us, because their hands have been tied through so many other dealers. So, quite honestly, by default, they've been coming to us. They know we don't have the Dentsply line and it's easy for us to take an order as long as the customer's credit is approved and we'll drop ship it.

DeBlasi Tr. 2820-21. Yet even Lincoln's experience demonstrates that Engima is not achieving success without a broad dealer network. While Lincoln's sales of Enigma teeth have grown, in 2002 they will represent at most only \$36,000 of Lincoln's \$800,000 tooth revenue. *Id.* at 2794-95. Because there is limited demand for the teeth, Lincoln does not stock the teeth and does not advertise them other than giving them space in its catalog. *Id.* at 2785-87, 2805-07. The low demand for the teeth did not justify the space or overhead required to stock and ship the teeth from Lincoln's facilities. DiBlasi Tr. 2787.

229. These sales of Enigma teeth have had no discernable effect on Dentsply's monopoly power.

It has continued increasing its prices by an average of 3.4 percent. Jenson Tr. 2307. Neither has it changed the composition of its teeth, introduced any new tooth lines, or changed its return policy. Jenson Tr. 2308. Nor has Dentsply approached Lincoln Dental and offered it the Trubyte tooth line in exchange for Lincoln dropping the Enigma line. DiBlasi Tr. 2808.

See also Weinstock Tr. 176 (Zahn has not observed any effect that Dillon's sales of Enigma teeth have had on Dentsply's conduct).

9. Professor Marvel's testimony should not be relied upon to conclude that Dentsply does not possess monopoly power.

230. After testifying during his deposition that he did not know or consider it important whether Dentsply had monopoly power, Dentsply's expert Professor Marvel testified for the first time at trial that he does not believe that Dentsply has monopoly power. Marvel Tr. 3718 ("I say now the answer is no"). This testimony is completely unreliable given Professor Marvel's admissions during his deposition and his failure to disclose the methodology, if any, that he used to arrive at this conclusion. Moreover, the need to impeach Professor Marvel repeatedly on significant issues further underscores the unreliability of this testimony. *E.g.*, Marvel Tr. 3715-17 (after impeachment, concedes he had not determined at time of his deposition whether Dentsply had monopoly power); Marvel Tr. 3713 (impeachment on whether he had looked at issue in any detail); Marvel Tr. 3710-11 (impeachment on whether he had methodology for determining monopoly power).

(a) Professor Marvel concedes that Dentsply has substantial market power. Marvel Tr. 3714. At his deposition, he testified that he had not considered whether Dentsply had sufficient market power to constitute monopoly power, nor did he consider it to be an important part of his analysis. Marvel Tr. 3713 ("I have not really considered that in any detail"), 3715 (not an "important distinction"), 3716 ("I really haven't done so"), 3717 (same). In fact, he had not even developed a methodology that he would apply if he was trying to determine whether a firm has monopoly power. Marvel Tr. 3711.

(b) Although he testified at trial that entry into the tooth market demonstrates the lack of Dentsply's monopoly power (Marvel Tr. 3646-47), at his deposition the most he could conclude from entry and competition from existing competitors is that "any monopoly power Dentsply might have would be modest, because it does face this ongoing competition." Marvel Tr. 3716. Indeed, Professor Marvel conceded at trial that a firm can have monopoly power even if it faces fringe rivals and entrants, Marvel Tr. 3722, 3725, and that "Dentsply's rivals, particularly Ivoclar and Vident, ... have not been cutting into Dentsply's Trubyte position." Marvel Tr. 3629.

(c) A monopoly power analysis done the way Professor Marvel did his, in the middle of his deposition and without knowing how to do it, is unreliable:

Q. And so you -- is it your view that in the roughly hundred pages or so in between where you discussed extensively how you hadn't done the work and how you had no opinion, during the deposition you were able to come up with an opinion suddenly that Dentsply lacks monopoly power, even though you had also told us you had no methodology for doing it? Is that your testimony?

A. That's my testimony.

Marvel Tr. 3721-22.

B. Dentsply has unlawfully maintained its monopoly power through its exclusionary conduct.

1. Dentsply's intent has been exclusionary and anticompetitive.

231. The express purpose of Dealer Criterion 6 has been anticompetitive -- to block Mould's competitors from the largest, or key, dealers selling Trubyte teeth by tying up those

dealers. In a document entitled, "Sales/Distribution Principles for Cash Cow Business," Chris Clark identified Dealer Criterion 6 as one of five principles for running the Trubyte tooth business. Clark's "reiteration" of Dealer Criterion 6 stated:

- Block competitive distribution points. Do not allow competition to achieve toeholds in dealers.
- Tie-up dealers
- Do not "free up" key players.

GX 171 at DPLY-A 004360; Clark Tr. 2608 ("[t]his is really a reiteration of Dealer Criteria No. 6").

232. GX 171 is an important document entitled to particular weight. It sets forth the sales and distribution principles under which Dentsply's tooth business operated. And it was prepared for an important, full-day, quarterly review meeting with John Weiland, the senior vice president in charge of the Trubyte Division. These quarterly reviews were "absolutely" taken very seriously within the division. Clark Tr. 2630.

233. Dentsply's intent to prevent its competitors from achieving "toeholds" in dealers is apparent not only from GX 171 but also from the admission of its Chief Executive Officer, Burt Borgelt, in his conversation with Tom Cavanaugh of Frink Dental in 1988. Borgelt had traveled to Cavanaugh's office in Illinois in an attempt to persuade Cavanaugh not to take on the Ivoclar tooth line. When asked why Dentsply would terminate him for doing so, Borgelt stated, "we cannot let Ivoclar get a foothold in the United States. This is our most highly profitable product out of our Dentsply division." Cavanaugh Tr. 695. *See also* Cavanaugh Tr. 696-97 ("Bert Borgelt's comment to me is the fact that they had to stop it now

in the bud before we were successful with it and other people would follow suit"). Dentsply did not call Mr. Borgelt as a witness to rebut these admissions.

234. According to Gordon Hagler, Trubyte's Director of Sales and Marketing from 1989-93 (Hagler Tr. 1178-79), the sole purpose of the policy was to exclude Dentsply's competitors from the dealers:

Solely. You don't want your competition with your distributors, you don't want to give the distributors an opportunity to sell a competitive product. And you don't want to give your end user, the customer, meaning a laboratory and/or a dentist, a choice. He has to buy Dentsply teeth. That's the only thing that's available. The only place you can get it is through the distributor and the only one that the distributor is selling is Dentsply teeth. That's your objective.

Hagler Tr. 1183-84.

235. Dentsply's anticompetitive intent is evident from its termination of Trinity Dental.

(a) In 1993, Trinity Dental, located in Geneva, Illinois, was a dealer selling Trubyte merchandise, but not teeth. It decided to add the Vita tooth line. As a result, it was terminated as a Trubyte merchandise dealer. Pohl Tr. 1903-06; GX 36.

(b) This interpretation of Dealer Criterion 6 -- that it prohibited merchandise-only dealers from adding competing tooth brands -- was in effect for at least the 2 ½ years in which David Pohl was Dentsply's National Sales Manager. Pohl Tr. 1901, 1906.

(c) Dentsply's alleged "free riding" justification for Dealer Criterion 6 cannot justify the termination of Trinity, given that Trinity was not a Trubyte tooth dealer. Reitman Tr. 3976 ("Professor Marvel's theory doesn't apply at all to a dealer [that doesn't] even carry Trubyte teeth"); Morgano Tr. 1888 (because Trinity did not sell Trubyte teeth, had

never been trained by Dentsply in how to sell teeth). Nor is there any reason to believe that preventing Trinity from selling competitive brands of teeth would somehow enhance its ability to sell Trubyte merchandise. Brennan Tr. 1707.

(d) The only explanation for Dentsply's termination of Trinity is the one given by Dr. Reitman: "I think the explanation is Trubyte was trying to foreclose a distribution point for Vita." Reitman Tr. 3976.

236. Dentsply's intent is also apparent from its use of Trubyte merchandise as additional leverage in coercing dealers to agree not to add competing tooth brands.

(a) When terminating Frink Dental for adding the Ivoclar tooth line, Dentsply terminated Frink as a Trubyte merchandise dealer as well. It did so not because Dentsply believed that Frink would not be an effective merchandise dealer after adding the Ivoclar tooth line, but because it "wanted to make a strong point." Brennan Tr. 1720.

(b) Similarly, when DLDS sought to add the Universal and Vita tooth lines, Dentsply threatened it with the loss of not only the Trubyte tooth line but its merchandise business as well. Vetrano Tr. 1426-27.

237. In October 1992, Dentsply recognized Jan Dental as a Trubyte tooth dealer for anticompetitive reasons. In order to obtain the Trubyte tooth line, Jan was required to stop selling Vita, Kenson, Dentorium and Justi teeth. GX 24, 26. As David Pohl wrote in an October 6, 1992 memo to his superiors, Robert Brennan and John Weiland, "[o]pening Jan with teeth will increase our presence within the laboratory market and eliminate several competitors." GX 26 at DS 016474; *see also* Pohl Tr. 1909 ("Yes, you would eliminate several competitors and have an opportunity to gain incremental market share").

238. Darby Dental was recognized as a tooth dealer in the mid-1990's in order to block Vita from a competitive distribution point.

(a) In June 1994, Dentsply turned down Darby's request to sell Trubyte teeth, stating that it had adequate distribution in Darby's area. GX 63. Indeed, at that same time, Dentsply internally concluded that it did "not need additional distribution points." GX 77 at DS 015926.

(b) Shortly after receiving this letter, Darby was visited by its local Vident representative. As a result, Sidney Nordhauser, the General Manager for Darby Dental (Nordhauser Tr. 3419-20), became interested in selling Vita teeth. Nordhauser Tr. 4128.

(c) When Dentsply learned of Darby's interest in selling Vita teeth, its position changed dramatically. Mr. Nordhauser told the local Dentsply sales rep, Holly DeFalco, that he was "seriously considering taking on Vita teeth." Nordhauser Tr. 4129-30. In response, Ms. DeFalco said:

'Wait a minute,' and she got on the phone right there and then, and I am not sure who she spoke to, and she said, 'Don't do anything, we will see you next week,' or something like that. So we did nothing, we waited, and their people came to us and it was a different story.

Nordhauser Tr. 4130. Whereas during the earlier discussions, Dentsply "really didn't listen to us too much," Nordhauser Tr. 4118, these negotiations were different because of "the fact that we had Vita thrown in. It made a difference." Nordhauser Tr. 4130.

(d) Dentsply then authorized Darby as a Trubyte tooth dealer upon Darby's agreement not to add the Vita tooth line. GX 82 at DS 015663; Clark Tr. 2636.

(e) A December 12, 1994 memo written by Chris Clark, Director of Sales and Marketing for the Trubyte Division (Clark Tr. 2486), shows that Dentsply's primary motivation for recognizing Darby was to block Vita from a key competitive distribution point. Clark was concerned about Vita gaining "a major distribution point (a third major one after DTS and Lincoln)." GX 77 at DS 015926. Clark was also concerned about the fact that Kent, an affiliate of Darby, was already a Trubyte tooth dealer and that if Darby added Vita teeth, "our dealer criteria becomes a sham for others to poke at." *Id.* However, the "key issue" for Clark was "Vita's potential distribution system. They're having a tough time getting teeth out to customers. One of their key weaknesses is their distribution system." *Id.* at DS 015927.

(f) Robert Brennan, Clark's boss who received this memo, agreed during his testimony that Darby was recognized as a tooth dealer "because it prevented Vita from getting a dealer." Brennan Tr. 1743. Brennan believed that Darby would have increased Vita's market share at Dentsply's expense. Brennan Tr. 1743-44. *See also* Clark Tr. 2645-46 (Clark agreed that Darby's threat to take on Vita teeth was not an idle one; he "certainly expected" Darby to do so if it was not recognized as a Trubyte tooth dealer).

239. In 1995, Dentsply recognized DTS as a tooth dealer to

DX 86 at DS 015805. DTS was a very effective, lab-focused dealer that had taken business away from Dentsply by selling Vita and Ivoclar teeth. Clark Tr. 2639-40. Dentsply's regional manager in the Midwest was concerned that Dentsply would have to compete even harder in that region if DTS was not recognized: "Should our decision be not to open DTS, I will have significant new competition to allocate time and resources against." *Id.*

240. The recognition of Jan, Darby and DTS in the early-to-mid-1990's is particularly significant in light of the admission by Robert Brennan, Trubyte's General Manager from 1986 to 1996, that he believed that Dentsply had more dealers than needed to properly distribute its teeth. Brennan Tr. 1710.

241. The anticompetitive purpose of Dealer Criterion 6 is also apparent from its overbreadth. It prevents a dealer selling Trubyte teeth at some, but not all, of its locations from adding a competing line at any of its locations. For example, despite the fact that Patterson Dental has 36 branches that do not have a tooth counter, GX 447 at 9, it would violate Dealer Criterion 6 if it added a competing tooth line at those locations. Brennan Tr. 1730-31.

2. Dentsply has foreclosed its closest rivals from between 78%-87% of the laboratory dealer outlets.

a. Dr. Reitman's foreclosure analysis demonstrates that Dentsply has foreclosed approximately 80% of the lab dealer outlets.

242. Dentsply sells its teeth through a network of dental laboratory dealers that operate approximately 100 outlets, or locations. Reitman Tr. 1483-84; GX 364-B; Jenson Tr. 2267. Dealer Criterion 6 applies to each of these dealers and each of these outlets. Under that criterion, a dealer selling Trubyte teeth at some, but not all, of its locations cannot add a competing tooth line at any location. Brennan Tr. 1730-31.

243. A "foreclosure rate" is the percentage of all potential outlets that are foreclosed to a particular competitor. Reitman Tr. 1518. In calculating foreclosure rates for each of Dentsply's rivals, Dr. Reitman used three different definitions of potential "outlets" for the sale of teeth: (1) all outlets currently selling teeth; (2) all outlets of dealers that are currently selling any dental laboratory product; and (3) all outlets of any dealer that is currently selling teeth at any of its locations, whether or not teeth are sold at all those outlets. Reitman Tr. 1518. He then calculated the subset of these potential outlets from which each of the various rivals are excluded by Dentsply's policies. Reitman Tr. 1518.

244. Vita and Ivoclar are foreclosed from between approximately 78%-87% of the available outlets under these three methods. Reitman Tr. 1519.

245. For the remaining brands of teeth — Austenal/Myerson, Universal, ATI/Justi — the foreclosure rate is somewhat lower, but always at least approximately 60%. These percentages are lower because these brands are sold, under the grandfathering provisions of Dealer Criterion 6, by some dealers selling Trubyte teeth. Reitman Tr. 1519.

246. Dr. Reitman's analysis, based upon 1999 data, is a reasonable estimation of the extent to which Dentsply has foreclosed its competitors from the dealers necessary to compete effectively in the tooth market, and it is far more reliable than Dentsply's misleading attempts to cast doubt upon it.

(a) Dentsply's assertion that Patterson had closed 20-some tooth stocks since 1999 was shown to be incorrect. On cross examination of Dr. Reitman, Dentsply's counsel stated, "And you know Patterson has closed something like 20 stocks, tooth stocks. You've got 48 up there for him and they only have about 28?" Reitman Tr. 1678. To prove

up this claim, Dentsply's Steve Jenson, when asked how many tooth stocks Patterson had, testified, "around 25, in that ball park." Jenson Tr. 2180 & DX 1665. Yet the affidavit of Patterson's Curt Schwieso, obtained during trial, establishes that Patterson still operates 48 tooth counters, and has well over 50 branches that maintain a stock of Trubyte teeth. GX 447 at page 9 (list of Patterson branches with tooth counters noted), & Exhibit A (list of Patterson branches with Trubyte tooth stocks).

(b) The fact that Mr. Jenson does not have more accurate information about the number of tooth stocks operated by one of his major dealers is striking, particularly given that Vident's Wayne Whitehill -- who does not sell teeth to Patterson -- testified far more accurately. Whitehill Tr. 387 ("Patterson, for example, has 45 tooth stocks").

(c) Mr. Jenson's testimony regarding the number of Zahn's and Darby's tooth stocks is similarly suspect. He claimed that Schein/Zahn had five. Jenson Tr. 2179 & DX 1665. Eleven days earlier, however, Norm Weinstock of Zahn testified, "Zahn Dental has nine facilities around the United States that have large inventories of teeth." Weinstock Tr. 104. *See also* Jenson Tr. 2180 & DX 1665 (Darby has one tooth stock); *compare* Nordhauser Tr. 3420 (as of 1999 deposition, Darby had total of six tooth counters).

247. Dr. Reitman's conclusion that the vast majority of lab dealer outlets are foreclosed to Dentsply's competitors is corroborated by testimony by other knowledgeable persons in the industry. Vident currently sells teeth to 13 dealers, and is "constantly" trying to obtain more. Whitehill Tr. 270; GX 153 (list of Vident dealers, showing that none are national or regional in scope). Vident has found, however, that there are few alternatives to the dealers selling Trubyte teeth. As Mr. Whitehill testified, "there aren't as many as you

would think that there would be. ... [S]maller dealers that actually handle dental laboratory products are not that numerous.” Whitehill Tr. 270. *See also* Becker Tr. 1823-24 (“there is no major dealer in America not selling Dentsply [teeth]”).

248. The fact that the number of dealers selling Trubyte teeth over the years has declined does not mean that more dealers have become available to Dentsply’s competitors. The primary reason why the number has declined is that larger Trubyte dealers are buying smaller Trubyte dealers. Clark Tr. 2577.

**b. Dr. Reitman properly excluded “purely operator” dealers -
- dealers that do not sell any lab products -- from his
foreclosure analysis.**

249. The term “operator dealer” is used two ways in the industry: (1) dealers that sell to operatories or dentists, whether or not they also sell to dental laboratories; and (2) dealers that serve only the operator and are not in the dental laboratory business at all. Reitman Tr. 1515-17.

250. Because most of the dealers selling Trubyte teeth, particularly large dealers such as Patterson, Darby, and Atlanta Dental, sell also to dentists, they are “operator” dealers under the first definition. Reitman Tr. 1515-16. Those dealers were included in Dr. Reitman’s foreclosure analysis. He excluded only the “purely operator” dealers -- dealers that, under the second definition, sell only to dentists. Reitman Tr. 1516.

251. The GX 108 at 110078,
and for an operator-only dealer to start selling teeth would “essentially [be] like a new dealer entering the market.” Reitman Tr. 1517. Such de novo entry is unlikely for several reasons.

(a) A dealer would have to identify and cultivate a “whole different set of customers.” Reitman Tr. 1517. As Norm Weinstock explained, “one of the big things in our industry, in the laboratory industry, is relationships. And the other big factor is knowledge of the industry. ... they don’t have the relationships, and they would really have to learn the laboratory business to be able to service the customer” Weinstock Tr. 160.

(b) Dealers would also have to invest not only in a stock of artificial teeth, but in a stock of other lab products as well because such dealers would want to sell a more complete range of products to labs, not just teeth. Reitman Tr. 1517 (“It’s a whole different set of products”); Weinstock Tr. 160-61 (not profitable to sell only teeth).

(c) These investments are substantial. “Getting into the tooth business is a relatively significant investment. It’s a significant investment in terms of, obviously, your specific personnel costs in terms of tooth counter specialists, but it’s also a large inventory investment.” Clark Tr. 2609; *see also* Weinstock Tr. 127 (tooth counters “extremely labor-intensive”).

(d) The tooth market as a whole has Reitman 1581; Jenson
Tr. 2303-04; DX 1625 at DPLY-A 200254

The dealers that already sell Trubyte teeth are, in general, becoming less interested in it because it is not very profitable.

GX 101

at DPLY-A 037305; *see also* GX 126 at DPLY-A 046401

(e) The number of dealers selling Trubyte teeth has declined, not increased, and the dealer market has become more concentrated as larger national dealers have acquired smaller dealers. Clark Tr. 2577; DX 460-A at DPLY-A 107396

(f) Dental labs are viewed as notoriously poor credit risks, particularly compared to dentists. Reitman Tr. 1517; Weinstock Tr. 161 (labs pay in about 60 days, compared to 30 days for dentists).

252. Dentsply itself has not viewed operatory-only dealers as likely entrants into the tooth market. During Michael Crane's tenure as a senior vice president at Dentsply, "the operatory dealers, to [his] knowledge, never had an incentive or a reason to get involved in a very costly, very complex, very technology sensitive area more than they may have done just with the superficial supplying of some product lines." Crane Tr. 1139. And when looking for new tooth dealers, Dentsply looked for dealers that already had a strong and dedicated focus on the laboratory, as opposed to operatory, market. Pohl Tr. 1912-13; *see also* GX 26 at DS 016474 (recommending opening Jan Dental because it had "a strong presence in the laboratory business"). During Pohl's tenure, there were very few dealers that had a strong focus on the lab market. Pohl Tr. 1913-14.

253. Several operatory-only dealers testified to their lack of interest in entering the tooth business.

(a) The testimony of Kevin Ackeret from Sullivan Dental was representative. From 1985 until 1997, when it was merged with Schein, Sullivan was a sizeable operatory-only dealer with approximately 25,000 customers. Ackeret Tr. 1786-1787. Sullivan was a national dealer with approximately 45 locations and a merchandise sales force of about 325 people. Ackeret Tr. 1786. Sullivan did not sell teeth and, despite several requests by Dentsply to do so, Sullivan consistently declined to enter the tooth business. Ackeret Tr. 1792, 1797. It did not want to sell teeth because teeth were too labor intensive, involved too many returns, the gross profit was less than on Sullivan's merchandise products, and its sales force was focused on dentists, not labs. Ackeret Tr. 1792, 1798-99. Moreover, a large number of labs are fairly small operations that buy small amounts, compared to dentists that purchase \$20,000 to \$30,000 per year. Ackeret Tr. 1796. Sullivan was so committed not to sell teeth that when it acquired a dental distributor that sold teeth, it divested that part of the business. Ackeret Tr. 1796-1797.

(b) Similarly, other dealers testified to their lack of interest in selling teeth due to lack of demand by their customers, the expense involved, their lack of expertise, and the greater credit risk involved in selling to labs. Shernowitz (Island Dental) Tr. 3838-40; Dhuet (Valley Dental Supply) Tr. 3847-48; Buckley (Smith Holding) Tr. 3854-56; Warren (Direct Dental Supply) Tr. 3863.

254. The fact that the Trubyte Division has received frequent requests by various entities to become Trubyte dealers does not prove that there are ample dealers available to sell

the teeth of Dentsply's competitors. Not all of these requests come from dealers; some come from dentists (DX 103 at DS 017398) and some from laboratories (DX 104 at DS 017400; DX 105 at DS 017393); *see also* DX 1607. In fact, during Chris Clark's tenure, he did not keep track of how many requests were coming from dealers versus labs, dentists, or other individuals. Clark Tr. 2652. In many cases of persons submitting written requests, he did not know what sort of entity it was. Clark Tr. 2651-52. Even in the case of persons who telephoned, some persons represented themselves as dealers when in fact they were laboratories. Clark Tr. 2652. Moreover, not everyone wanted Trubyte teeth; some were only interested in the Trubyte merchandise products. DX 1607 at DPLY 022622; Clark Tr. 2653-54; Jenson Tr. 2285-86. Most important, while Dentsply required dealers to submit written business plans to show they could add incremental business, there is no evidence that any dealer submitted such a plan to Dentsply. Jenson Tr. 2286 ("I have not received a plan from a dealer in my tenure"); Pohl Tr. 1947. Therefore, Dentsply cannot show that any of these applicants were creditworthy, Jenson Tr. 2286, or otherwise capable of being an adequate distribution channel for anyone's artificial tooth products.

255. Neither the testimony of Steven Desautel of Accu Bite nor that of Vito Clavelli of Tri-State Dental shows that dealers that operator-only dealers are likely to enter de novo into the tooth business and succeed.

(a) Accu Bite did not enter the tooth market de novo; it entered by essentially acquiring an existing tooth dealer's business and its critical personnel. Accu Bite was recognized as a Trubyte tooth dealer only after Professional Dental, an existing Trubyte tooth dealer, went out of business in 1992. Desautel Tr. 2449-50, 2457-58. Prior to that time,

Accu Bite was turned down by Dentsply and others because Accu Bite was a very small dealer and was not focused on the lab market. Desautel Tr. 2441-42. When Professional exited the market, however, Accu Bite hired Professional's branch manager, John Thomas, who had more than 10 years of experience in the tooth business and brought a portfolio of existing tooth customers with him to Accu Bite. Desautel Tr. 2450. Professional had obtained a large contract from the State of Michigan through Thomas's efforts, Desautel Tr. 2452, and Accu Bite was able to obtain that same contract by virtue of hiring Thomas. Desautel Tr. 2453, 2456. Mr. Desautel conceded that Accu Bite did not have the expertise to sell teeth until it hired Mr. Thomas, and that without the experience he brought, "I'd have absolutely zero incentive to go and create that experience." Desautel Tr. 2459. With him and the business he brought to Accu Bite, however, Accu Bite gained a "strong foothold" to solicit other labs for business and was able to be recognized as a Trubyte tooth dealer. Desautel Tr. 2457-58.

(b) The testimony of Vito Clavelli of Tri-State Dental was too speculative to establish anything about the interest or ability of operatory-only dealers to enter and become successful in the tooth business. Tri-State is not in the tooth business today, and Mr. Clavelli clearly knows little about it. Clavelli Tr. 3364-67. Of Tri-State's 2,500 customers, only two or three are labs. Clavelli Tr. 3364-65. Mr. Clavelli's speculated that 40 percent of his dentist customers have in-house labs. Clavelli Tr. 3367 ("I don't know -- I don't deal with that any more"). That testimony is not credible. If 40% of the nation's 100,000 dentists had in-house labs, there would be 40,000 denture labs in dentist offices alone — vastly more than the 7,000 figure supported by several witnesses in the case. Weinstock Tr. 91 (at least 100,000 dentists in country); PFF ¶ 33 (7,000 denture labs).

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He is not interested in selling Vita teeth, and does not appear to be very familiar with Ivoclar's tooth business. Clavelli Tr. 3361 (claims that Ivoclar "sell direct to dentists"; not interested in Vita). Despite the fact that he has been turned down by Trubyte because he has no plan to provide the "incremental business" necessary to become a Trubyte dealer, Clavelli Tr. 3370, he is convinced that he will become a Trubyte dealer once he gets a tooth counter. Clavelli Tr. 3354 ("If we have a tooth counter like everybody does, we'll have no problem getting the line"). No one from Dentsply has told him that, however. Clavelli Tr. 3373. Before Dentsply's lawyers called him about this case a few weeks prior to trial, he had not been in contact with anyone at Dentsply for almost a year. Clavelli Tr. 3373-74. His testimony should be viewed in light of his aspirations to obtain the Trubyte tooth line by the end of the year. Clavelli Tr. 3374.

256. In sum, dealers that do not sell any lab products are not potential channels for the sale of teeth. This was aptly summarized by Kevin Dillon of Dillon Company, Inc., who testified:

They're not in that business. They don't call on laboratories. It would be like me saying do I consider a hardware store a place to distribute my dental products. No different. I wouldn't want to distribute my dental products through a hardware store and I surely wouldn't want to do it through an operator. They're not in the business.

Dillon Tr. 4083.

- c. **Dr. Reitman properly excluded distributing labs from his foreclosure analysis.**

257. Distributing labs are dental labs that also sell products to competing labs. Reitman Tr. 1513. There is a clear consensus in the industry that using distributing labs is an ineffective method of selling teeth to other labs, primarily because labs do not like to buy products from their competitors. Reitman Tr. 1513; Weinstock Tr. 161-62; Becker Tr. 1827.

Vident and Ivoclar have tried, but failed, to make distributing labs effective distributors of their teeth. Whitehill Tr. 247; Ganley Tr. 992. *See also* Langer Tr. 3296 (lab in Boise, Idaho which buys very little from lab distributor because it sells teeth at higher prices and because it is a competitor).

- d. The 80% foreclosure rate understates the competitive impact of Dentsply's conduct because the remaining dealers are qualitatively inferior.**

258. The remaining lab dealers left for Dentsply's competitors are small, "specialty" dealers. Reitman Tr. 1512. They differ from the dealers selling Trubyte teeth in several ways: they often do not carry the full range of dental lab products; they do not have dedicated tooth counters; they serve fewer customers; and they have fewer resources like catalogues and sales representatives. Reitman Tr. 1512. In general, they do not provide the full range of benefits to both customers and suppliers that are provided by the larger, full-service dental lab dealers. Reitman Tr. 1512; GX. 364-C, GX. 364-D. *See also* Becker Tr. 1824 (dealers not selling Trubyte teeth are small, hard to find, have credit problems, and would not help Heraeus Kulzer grow its market share).

259. Of the lab dealers remaining for Dentsply's competitors, Lincoln Dental Supply is clearly the largest. Even Lincoln, however, is not on par with the dealers selling Trubyte teeth, particularly in the sale of premium teeth. Lincoln's tooth sales have always been disproportionately in the "sub-economy" segment in which Dentsply and its closest competitors do not compete. Jenson Tr. 2250-51. Prior to 2000, it sold only private-label teeth, made in South America, selling for about \$1 dollar per card. DiBlasi Tr. 2797. Today, 80% of its tooth revenue comes from private label teeth selling for \$1.16 per card. DiBlasi Tr. 2799. As Dentsply's Steve Jenson explained, sub-economy teeth are those selling for about \$1 per card, and they do not have the same durability or wear quality of premium teeth. Jenson Tr. 2250-51 ("They don't last very long. You see those teeth, you get what you pay for"). As a result of selling such inexpensive teeth, Lincoln's customers are very different from the customers that would buy the premium teeth sold by Vita, Ivoclar and Myerson. Historically, Lincoln has sold most of its teeth by mail order to one large chain of denture centers producing low-cost dentures for Medicaid and welfare patients. DiBlasi Tr. 2769, 2801-02. Today, that same chain still constitutes 35% of Lincoln's business. DiBlasi Tr. 2802. Lincoln also does not provide some of the services performed by other lab dealers. Lincoln does not accept returns of broken sets because its teeth are too cheap to justify such a service. DiBlasi Tr. 2799, 2803. Lincoln is primarily a mail order dealer relying on its catalogue to generate sales; it has only one outside sales rep who is primarily devoted to visiting lab customers. DiBlasi Tr. 2796.

260. Apart from Lincoln, Dentsply called Jack Silcox to represent the kind of lab dealer that is available to Dentsply's competitors. Silcox is a "very small" dealer selling Justi,

Coral, Dentorium and Universal teeth. Silcox Tr. 2046, 2050. Its tooth sales last year were \$88,000. Silcox Tr. 2049. Its total revenues are "perhaps in excess of \$400,000 a year now." Silcox Tr. 2046. Mr. Silcox estimated that the larger dealers selling Trubyte teeth do as much business in a day as he does in a month. Silcox Tr. 2068 ("Probably. Maybe more").

Silcox has no employees, no sales force, no customer service department, no catalog, does not advertise in trade journals, and does not have a tooth counter. Silcox Tr. 2069-70.

261. Remarkably, the small specialty dealers currently selling Vita teeth are even smaller than Jack Silcox and, of course, vastly smaller than the dealers selling Trubyte teeth.

Vident's dealers cover very small geographic areas and are too small to be able to sell teeth effectively. Whitehill Tr. 249. For these reasons, despite having 13 small, specialty dealers, approximately 90% of Vident's tooth sales are made directly to labs. Whitehill Tr. 249. *See also* Reitman Tr. 1697-98 (Vident dealers does not have a network of dealers like Dentsply does, given differences in number of outlets, number of tooth counters, and services provided).

262. Dentsply ensures that its competitors have inferior distribution alternatives by offering the Trubyte tooth brand to any dealer that grows large enough to become a competitive threat. For example, although Dentsply had terminated DTS as a tooth dealer in

1990, it offered DTS the Trubyte tooth line in 1995 in exchange for DTS's agreement to stop selling Vita and Ivoclar teeth. Underwood Tr. 3405-06; GX 86 at DS 015805; Clark Tr. 2639-40. In October 1992, Dentsply recognized Jan Dental as a Trubyte tooth dealer for similar reasons. GX 24, 26; Pohl Tr. 1909.

3. The effects of Dentsply's conduct have been exclusionary and anticompetitive.

263. Far from competing "on the merits," over at least the past 14 years, Dentsply has repeatedly blocked its competitors from the distribution points necessary to compete effectively in the market — the network of dental lab dealers selling Trubyte teeth. Over this time period, Dentsply has frustrated consumer demand by causing at least 11 separate dealers to drop, or not add, a total of at least 12 separate brands of teeth. *See* PFF ¶ 44, *et seq.* In so doing, Dentsply has kept its own sales and market share at an artificially high level. It has also caused substantial harm to competition and consumers. It has reduced consumer choice, frustrated consumer preferences, increased prices, reduced the level of product promotion in the market, deterred effective entry and expansion by rival firms, and reduced the efficiency of dealers. Reitman Tr. 1526-28; GX 364-E.

264. If Dentsply's conduct is enjoined, dealers will add competing brands, Dentsply's market share will go down as labs begin buying more of the competing brands, and prices will decrease. The market will be more competitive, and consumers will benefit. Reitman Tr. 1538-39.

a. Dentsply has kept its market share at an artificially high level.

265. Dentsply's exclusionary conduct has been longstanding and pervasive. On numerous occasions, Dentsply has coerced dealers to agree to drop, or not add, competing brands of teeth. This conduct began in at least 1988 and has resulted in at least 12 separate brands of teeth being excluded from 11 separate dealers. These dealers, located throughout the United States, include national dealers such as Zahn, Patterson, and Darby, and several regional dealers, such as Atlanta, Frink, Jan, Pearson, and DTS.

266. The impact that this exclusionary conduct has had on the sales and market shares of Dentsply and its competitors is not in dispute. Dentsply executives concede that Dealer Criterion 6 has protected its market share and that without it, it would lose market share. Miles Tr. 3513; Clark Tr. 2584; Brennan Tr. 1718. Given the number of dealers it has pressured since 1988, this market share loss likely would be significant. Indeed, in seeking a declaratory judgment against the United States on these same issues in December 1998, Dentsply alleged rival tooth lines could displace an "enormous" amount of Trubyte teeth in its dealerships if it were forced to surrender Dealer Criterion 6. D.I. 244, App. B-1398.

267. The results of the Wind Survey confirms and quantifies this effect. Dr. Reitman's analysis of the survey data shows that when any tooth brand is sold through a local dealer, its market share will increase in the short term by roughly 30%. Reitman Tr. 1530. Dr. Wind concluded that the market shares of both Vita and Ivoclar would increase substantially if their teeth were made available through a local dealer and/or mail order dealer — in just three months, by between 10%-32% for Vita and 24%-35% for Ivoclar. Wind Tr. 803-04; GX 140 at pp. 14-15. Even the analysis performed by Dr. Rossi, Dentsply's survey expert, showed that the combined shares of Vita and Ivoclar would increase by 25%. Reitman

Tr. 1531. The fact that three different people using different models arrived at substantially the same result is a good indication of robustness -- that what the survey is measuring the true effect of local availability. Reitman Tr. 1532.

268. Had Dentsply not intervened and stopped so many dealers from selling competitive teeth, the market shares in the tooth market would be very different than what they are today. The dealers affected were among the largest and most effective in the industry, and those dealers that were forced to drop competing brands were increasing the sales of those brands at Dentsply's expense.

(a) DTS had been an effective dealer for both Ivoclar and Vident, with just over \$1 million in annual sales of Ivoclar and Vita teeth combined. GX 61 at DS 015810; Pohl Tr. 1917. DTS greatly increased the sales of Vita teeth in the territories served by DTS, and Vident's sales in those territories declined when it lost DTS as a dealer. Whitehill Tr. 260-61, 263. DTS was also a very effective dealer for Ivoclar teeth, with a good reputation, good personnel, and a manager who had formerly been a salesperson for Ivoclar. Ganley Tr. 1002-03, 1006.

(b) When Frink sold Ivoclar teeth, Dentsply feared that Ivoclar would increase its market share at Dentsply's expense. Brennan Tr. 1747-48. Frink did increase the sale of all of the Ivoclar products it was selling, Cavanaugh Tr. 712, and Ivoclar believed that it was a more effective competitor to Dentsply in the Midwest as a result. Ganley Tr. 999-1000.

(c) Vident's tooth sales "increased quite rapidly" when Jan Dental was selling Vita teeth, and declined in Jan's territory when Jan stopped selling them. Whitehill Tr.

264 (“[t]hey were most effective for us”). Dentsply’s David Pohl acknowledged that Jan was an effective dealer focused on the laboratory market, and that gaining market share at the expense of other brands was the point of recognizing Jan as a Trubyte tooth dealer. Pohl Tr. 1909.

(d) Had Darby taken on Vita teeth in 1994, Darby would have pushed the Vita teeth to “every customer we had,” and likely been quite successful with it. Nordhauser Tr. 4128-29. *See also* Nordhauser Tr. 4159 (the Vita line was within Dentsply’s price range, and Darby “did have a share of the tooth market”). Those sales would have likely come at Dentsply’s expense. Nordhauser Tr. 4129. Later, after Darby added the Vita tooth line by virtue of its acquisition of DTS, Dentsply forced Darby to agree not to promote Vita teeth through its other branches besides New York. Had that not occurred, Darby “absolutely” would have sold Vita teeth through its other divisions and by promoting them more vigorously. Nordhauser Tr. 4138.

(e) In addition, competitive brands would be sold today by far more dealers than just those involved in these specific historical episodes. Ivoclar’s use of Frink in the late 1980’s was what it “hoped to be [its] first step toward dealer distribution.” Ganley Tr. 1051. Vident has approached numerous other dealers in an attempt to obtain distribution. Whitehill Tr. 265-69. Myerson has as well. Swartout Tr. 1311-14.

269. The effects from enjoining Dentsply’s exclusionary conduct are also clear. In the absence of Dealer Criterion 6, dealers would add competing brands, labs would buy more of those brands, and Dentsply’s market share would fall. Miles Tr. 3513; Clark Tr. 2584; Brennan Tr. 1718; Whitehill Tr. 285 (Vident would approach dealers if Dentsply’s conduct

enjoined); Ganley Tr. 1022, 1106 (Ivoclar would negotiate with dealers);

Harris Tr. 617-19 (Atlanta Dental would add Vita to meet "customer needs in local availability").

b. Dentsply has frustrated consumer preferences and reduced consumer choice.

270. Dentsply's conduct has reduced consumer choice and prevented labs from buying their preferred brands through their preferred distribution channel. Reitman Tr. 1526. Many of the dealers seeking to add competing brands of teeth were doing so because their lab customers were asking to buy these brands from them. Cavanaugh Tr. 724; Harris Tr. 599-600, 615; Vetrano Tr. 1423-24. By coercing these dealers not to add these competing products, Dentsply prevented these lab customers from getting what they wanted from where they wanted it. Even Dentsply's expert, Professor Marvel, recognized this as a cognizable effect and harm to consumers during his previous work on a case involving augers. Marvel Tr. 3795 (found customers "would be harmed because they couldn't get the product they wanted from the dealers that they wanted to deal with"). In this case, this effect continues today because some of these same dealers still receive requests for these competing tooth lines. Harris Tr. 616-17; Vetrano Tr. 1422.

271. Dentsply has also caused some labs to use less preferred tooth brands. Because they are unable to buy their preferred competing brands from their dealer, they instead settle for a Dentsply Trubyte tooth which, for whatever reason, is a less preferred product for them. Reitman Tr. 1526; Ryan Tr. 1252-56; Swartout Tr. 1303-04. The fact that market shares

would shift in the absence of Dealer Criterion 6, that consumers would buy more of the competing brands if they were available through dealers, makes it clear that consumers today are using less preferred brands. Reitman Tr. 1690-91.

272. The use of a less preferred tooth in a denture can represent a serious harm to a denture patient. For years before Dentsply introduced its Portrait tooth line, the vast majority of its Bioform tooth shades did not match the shades of the popular Vita shade guide. In fact, the aesthetics of Dentsply's teeth were generally considered inferior to Vita's and Ivoclar's. Dentsply's prices were 10%-15% higher than Vita's. Despite this, when receiving a prescription for Vita-shaded teeth, in 72% of the cases labs were instead using Dentsply teeth, the ones available through the dealer network. *See* PFF ¶ 201. As Dentsply's tooth product manager at the time testified, a lab that used a Bioform IPN tooth to fill a prescription for a Vita shade used a more expensive tooth that did not match the prescribed shade as well. Turner Tr. 421. This was a significant harm because shade is a key component of the overall aesthetics of a tooth. Miles Tr. 3497.

273. This particular example of consumer harm has not necessarily been fixed by the introduction of Dentsply's Portrait line. Even today, many believe that the Portrait teeth do not completely match the Vita shade guide. *See* PFF ¶ 211.

274. This same kind of harm may well recur in the future whenever labs believe that the teeth of Dentsply's competitors are superior in some important product attribute. *E.g.*, Mariacher Tr. 2912 (Ivoclar's newest teeth are superior to others on market in their ease of use). In fact, the pre-Portrait story of labs substituting Dentsply teeth for Vita teeth may well replay itself in the future given the growing popularity of Vita's newest shade guide. In 1998,

Vita introduced the 3D Master Shade Guide, an innovation that improved upon the Classical Shade Guide by increasing the number of shades from 16 to 26. Whitehill Tr. 232-33. The new 3D Master Shade Guide is growing in popularity; approximately of the dentists in the United States have purchased it. Whitehill Tr. 233. When Vita introduced the 3D Shade Guide, it also introduced new teeth in those new shades. Whitehill Tr. 233. Dentsply, however, does not sell teeth in the new 3D shades. Whitehill Tr. 235.

c. Dentsply has increased market-wide prices.

275. Prices will fall in the absence of exclusive dealing because consumers will become more price sensitive once multiple brands become available through the same dealers. This, in turn, will increase the incentive for tooth manufacturers to cut their prices. As Dr. Reitman explained:

When multiple brands of teeth are being sold through dealers, through the same dealer, the customer going to that dealer can call the same phone number, use the same fax, go to the same tooth counter representative. ... Since all of those things are more similar, customers are going to respond more to price differences between the brands. So, in other words, they become more price sensitive. ... If tooth suppliers know that customers in the marketplace are more price sensitive, then they have more incentive to cut the price, because they know when they cut the price, more customers are going to respond and buy their product, because it now offers a better value in the marketplace.

Reitman Tr. 1528-29.

276. The testimony of Dentsply's competitors supports this intuitive explanation for how Dentsply has affected price in the market. In the past, consumers have not been very price sensitive, and so there has been little incentive for competitors to reduce their price. E.g., Ganley Tr. 1011-12 (Ivoclar has tried to discount the price of its teeth, both to individual labs and to broader-based laboratory chains, but this has not been effective in increasing tooth

sales); PFF ¶¶ 191-206 (even when Vita had an aesthetically superior tooth and 10%-15% lower prices, Vita was not increasing in market share). In the future, however, if given access to dealers, the prices of competing tooth brands will decrease. James Swartout of Myerson testified that his company already charges lower prices in Connecticut and Southern California, areas in which Myerson has better dealer representation. In Connecticut, Mr. Swartout estimated that labs are saving 10% over Myerson's standard list price for teeth. Swartout Tr. 1317-18.

277. Dentsply's Chris Clark agreed that both dealers and labs are likely to receive lower prices in the absence of Dealer Criterion 6:

If I were in the shoes of the competitive tooth brand and I had a Trubyte dealer that was open now to take my line, I would certainly make it worth their while financially to do so. And what I would do is I'd basically go in and offer the dealer a higher margin on my tooth than what Trubyte does and do that in such a way it's a lower price point to the laboratory competitive tooth rather than Trubyte. And the end result, there is incentive for the lab to switch, and dealer to switch as well. They're making more money.

Clark Tr. 2584-85.

278. Dr. Reitman's analysis of the Wind Survey data confirmed and quantified the price effect that he had earlier concluded would occur in the absence of exclusive dealing.

Reitman Tr. 1532, 1692, 3903-04; see PFF ¶¶ 126-35. Dr. Reitman found that the price

sensitivity of customers will, as he suspected, increase as more brands become available through local dealers. Reitman Tr. 1532, 1692. This increase is statistically significant. Reitman Tr. 1692; *see also* Reitman Tr. 3897-98, 3908-09. Using a differentiated product Bertrand competition model, the most commonly-used model for price competition in industrial organization economics, he determined that the prices of all premium teeth in the market will fall by approximately 4%-5% in just three months. Reitman Tr. 1532-33, 1543-44; GX. 442.

279. Even Dentsply's expert, Professor Marvel, conceded that he believed that prices would fall in the absence of Dealer Criterion 6. Marvel Tr. 3648-49 ("both of the theories offered in this case would say that, in the absence of exclusive dealing, prices would fall"). Professor Marvel believes that prices will fall for a different reason — because Dealer Criterion 6 is procompetitive and, in its absence, Dentsply would promote its teeth less and therefore have lower costs. Marvel Tr. 3649; Reitman Tr. 3887. As explained elsewhere, Professor Marvel's prediction of less promotion in the absence of Dealer Criterion 6 is not supported by the evidence. PFF ¶¶ 373-77. In addition, the price effect found by Dr. Reitman stems solely from the anticompetitive effects of Dealer Criterion 6, and cannot be explained by any procompetitive effects of the policy. Reitman Tr. 3887-88. Therefore, even assuming there were procompetitive effects, this would only imply a further price decrease. Reitman Tr. 3887-88.

280. There are long-term price effects as well. Beyond the three-month period measured by the Wind Survey, dental labs will have time to change the brands of teeth they have in stock, communicate to dentists the availability of these other competing brands, and

provide additional training to their technicians in the use of other brands of teeth. Reitman Tr. 1533-34. As the competitive significance of the competing brands grows, "that will lead to increased competition and, in particular, increased price competition, and even lower prices in the marketplace over time." Reitman Tr. 1534. "It's like putting a few more holes in the pricing umbrella that Mr. Turner testified about last week." Reitman Tr. 1534; *see* Turner Tr. 456 (Dentsply sets prices and others compete under that "broad umbrella").

d. Dentsply has reduced competition and the overall amount of promotional activity.

281. Dentsply's exclusive dealing has reduced the overall level of promotional activity in the market. As with pricing, Dentsply's competitors have not had the proper incentives to promote their tooth products aggressively because those products are not available through dealers. "When you are selling products through an inferior distribution channel it is hard to drive sales through that channel." Reitman Tr. 1534-35. Better distribution equates with more aggressive promotional activity. In the areas in which Myerson has better dealer representation, it has been "more aggressive in our sales and marketing ... we have conducted various direct-mail campaigns through our dealers to laboratories, trying to increase awareness." Swartout Tr. 1316-17.

282. If Dentsply's conduct is enjoined, competition will increase in the market because both Dentsply and its competitors will increase their promotional activity.

(a) Dentsply's competitors will increase their promotional activity in the absence of exclusive dealing. If Vident had access to better dealer distribution, it would increase its level of advertising and promotion because it would have an increased possibility

of more sales. Whitehill Tr. 281-82. As it does today in those areas in which it has better dealer distribution, Myerson would invest in a variety of procompetitive activities if it could expand its dealer network: "I would even ... , for example, invest more money in sales and marketing, as I said, whether through dealer specific promotions, national advertising to dentists in dental trade journals as well as to laboratories. All of those things would be tactics I would certainly invest in." Swartout Tr. 1319.

(b) Dentsply will try harder as well. Without Dealer Criterion 6, Dentsply believes it will lose market share. Miles Tr. 3513; Clark Tr. 2584; Brennan Tr. 1718. In response to that, Dentsply will compete even harder to try to get that market share back. Reitman Tr. 1535, 3971-72. As its Chief Executive Officer John Miles testified, "Certainly we would." Miles Tr. 3513. Dentsply's Steve Jenson agreed: "My job is to grow our business, so . . . if this market strategy isn't going to be allowed, then we'll try to find a market strategy that will allow me to grow my business for the future, yes." Jenson Tr. 2309. The ways in which Dentsply might try to do that are all procompetitive: increasing R&D expenditures; increasing sales and marketing expenditures; and expanding the size of its sales force. Miles Tr. 3514.

(c) This is consistent with Dentsply's conduct in the past. On the few occasions when dealers have sold both Trubyte teeth and the teeth of Vita or Ivoclar, Dentsply has increased its competitive efforts in an attempt to convert labs from these competing brands to Trubyte. For example, in 1995, when DTS was recognized as a tooth dealer, DTS was permitted to keep a stock of Vita teeth in its New York branch. It also gave Dentsply a list of its Vita tooth customers so that Dentsply could try to convert them to Trubyte teeth.

Raths Tr. 1159. Dentsply did make those additional efforts, and converted several labs. Clark Tr. 2687-88. Then in 1998, when Darby acquired DTS, Darby was permitted to keep the Vita tooth stock in New York. Once again, Dentsply agreed to make sales calls on the labs using Vita teeth, and Dentsply did that as well. GX 130 at DARBY-001121Y (“We also will work with Darby to spend sales calls converting current Vita users to Dentsply teeth”); Clark Tr. 2689-90.

(d) Dentsply would have competed even harder in the past had dealers been free to sell competing brands. In 1995, when Dentsply recognized DTS as a tooth dealer in exchange for its agreement to drop Vita and Ivoclar teeth from three of its locations, Dentsply’s regional manager in the Midwest candidly admitted that Dentsply would have to compete even harder if DTS was not recognized: “Should our decision be not to open DTS, I will have a significant new competition to allocate time and resources against.” GX 86 at DS 015805.

e. Dentsply has deterred entry and expansion.

283. As noted above, Dentsply’s exclusionary practices has completely excluded at least two tooth brands from the United States market, delayed the entry of another, and substantially limited the success of those firms that have entered the market. In addition, it has made it difficult for firms already in the market to compete effectively and expand their sales. PFF ¶ 212 *et seq.*

f. Dentsply has reduced dealer efficiency.

284. Dealers themselves are less efficient due to Dentsply's exclusionary policies.

Reitman Tr. 1537. Allowing dealers to carry more brands of teeth and make more sales through an individual outlet or branch lowers its average costs by spreading the costs of a tooth counter across a larger volume of sales. Conversely, if a dealer is not allowed to carry more brands, its costs increase and its operations become less efficient. In response, dealers have tried to save money by closing tooth counters that lab customers otherwise value.

Reitman Tr. 1538.

g. Professor Marvel's testimony should not be relied upon to conclude that Dentsply's conduct has not had anticompetitive effects.

285. Professor Marvel testified that there are no anticompetitive effects in this case. This testimony is not credible, particularly in light of Dr. Reitman's contrary conclusions. Dr. Reitman's opinions are based on over five years of work studying the industry, reviewing the extensive document productions and deposition record in this case, and conducting his own econometric analysis of the Wind Survey data. Reitman Tr. 1464-70 (reviewed over 100 deposition transcripts, 20-25 interviews of various market participants, 10 boxes of documents, and various types of market data; in addition, he visited facilities of firms at each level of distribution). Professor Marvel's opinions about how consumers can be harmed by exclusive dealing kept changing during the litigation, as the United States learned more about his opinions and the facts of the single case (the "augers case") in which Professor Marvel found an exclusive dealing arrangement to be anticompetitive.

(a) In the augers case, Professor Marvel found harm to consumers of augers. Marvel Tr. 3791. He "concluded that the customers would be harmed because they

couldn't get the product they wanted from the dealers that they wanted to deal with." Marvel Tr. 3795.

(b) Yet, in reaching his initial opinion in this case, Professor Marvel applied a very different approach. He claimed that exclusive dealing could have anticompetitive effects only by creating an impenetrable and complete entry barrier. Marvel Tr. 3743; 3742 (under existing theories, exclusive dealing can harm competition only by preventing rivals from entering the market).

(c) During his deposition, Professor Marvel clearly delineated certain "necessary conditions" for exclusive dealing to be anticompetitive, which follow from his claim that exclusive dealing can only be anticompetitive through excluding competitors. These conditions conveniently fit his conclusion that Dentsply's conduct is not anticompetitive: (i) the dealers on which it is imposed must be an "essential facility," the only way in which rivals can get their products to customers (Marvel Tr. 3748, 3753). No alternative dealers or means of distribution can be available, Marvel Tr. 3750 (impeachment with prior deposition testimony), no matter how much less efficient that alternative is. Marvel Tr. 3757, 3754; (ii) exclusive dealing must be imposed prospectively, before any rivals have entered (Marvel Tr. 3748). Professor Marvel claimed that no economic theory existed for finding exclusive dealing anticompetitive against rivals that have already entered. Marvel Tr. 3741-43. Indeed, he identified this "necessary condition" as supplying his biggest objection to finding Dentsply's use of exclusive dealing anticompetitive. Marvel Tr. 3743; and (iii) long-term contracts must be present (Marvel Tr. 3752-53).

(d) During his deposition, Professor Marvel was questioned about his work in the augers case. He portrayed his work there as consistent with his claim here that exclusive dealing can only be anticompetitive when it completely prevents entry. He testified that he found in the augers case that entry barriers existed, that exclusive dealing had made the leading firm's market share impregnable, and that a number of firms tried to enter the market but failed. Marvel Tr. 3775-77. He refused to discuss the facts of the augers case any further, however, claiming confidentiality concerns. Marvel Tr. 3777.

(e) The United States had to move this Court to resume Professor Marvel's deposition so that we could question him about his work in the augers case. Marvel Tr. 3777. Professor Marvel reviewed the brief submitted in support of this motion along with the appendix, which included pages from his deposition. Marvel Tr. 3777-78. He saw that the United States had requested an opportunity to depose him about his testimony that he found entry barriers in the augers case, that exclusive dealing had made the leading firm's share there impregnable, and that a number of firms had tried to enter the market but failed. Marvel Tr. 3778-79. Neither he nor Dentsply notified the United States or this Court of any need to correct his testimony.

(f) During a January 22, 2002 status conference, this Court gave Dentsply the option of either having Professor Marvel answer questions about his work on the augers case or he would not testify in this case. January 22, 2002, Tr. at 4 ("[S]o my feeling is that you either work it out or Dr. Marvel won't be allowed to testify.")

(g) That apparently solved Professor Marvel's confidentiality concerns. At the subsequent deposition, Professor Marvel admitted that he had given incorrect testimony

about his work on the augers case. Exclusive dealing did not make the leading firm's share impregnable, and he had not found firms that attempted to enter but failed. Marvel Tr. 3780-81.

(h) Professor Marvel concedes that he had found exclusive dealing to be anticompetitive in the augers case without several of his "necessary conditions" here being met. In that case, he found competitive harm despite the fact that the exclusive dealing was not applied prospectively, there were alternative means of distribution, and there were no long-term contracts between the defendant and its dealers. Marvel Tr. 3799-800.

(i) In an attempt to reconcile his work in the augers case with his opinions here, Professor Marvel came up with a new theory at trial. Despite his earlier insistence that exclusive dealing can only cause harm by preventing entry, Professor Marvel gave up his conditions that exclusive dealing must be applied prospectively and prevent competitors from entering. Marvel Tr. 3600 ("I would be worried about a barrier to entry that was caused by exclusive dealing. A barrier to entry or expansion of the rivals"), 3601 ("That is one of the things you would look for to see, as I said before, if there is a barrier of some sort that keeps rivals from entering or from expanding. One way to say this is are they foreclosed from the customers to which they wish to sell their tooth products.") And he gave up his condition that exclusive dealing must foreclose the only way to get a product to consumers. Marvel Tr. 3754 (acknowledging that "up to yesterday," theory had required that dealers constitute only way to reach the market); Marvel Tr. 3757-58 ("Q. Let's look at what you've said at your deposition. A. No, I understand I said something different."). Instead, he developed a theory that exclusive dealing is not harmful as long as rivals have access to means of

distribution that are at least "remotely competitive," although he could not say how much less efficient an alternative would have to be to meet that standard. Marvel Tr. 3755-56, 3761-62.

Professor Marvel conceded that he changed this condition for the first time at trial:

Q. Right. Going back to my question, what we've done is we've had years of discovery, expert reports and depositions, and today you are telling me for the first time that you have changed a condition that you have told me repeatedly throughout is essential, a necessary condition. That's correct now; right?

A. Correct.

Marvel Tr. 3758.

(j) Despite this attempt to reconcile his work in augers with his work here, Professor Marvel's new "remotely competitive" standard would not have prevented the harm to augers consumers with which he was concerned - being unable to purchase from dealers from whom they wanted to purchase.

(k) Professor Marvel's opinions on the effects of Dentsply's conduct are unreliable. He reached his opinion by using an approach that was inconsistent with his earlier work in the augers case. Then, when that inconsistency surfaced, he abandoned that approach at trial and substituted a new, untested, and standardless approach.

V. Dentsply's exclusive dealing practices violate Section 1 of the Sherman Act and Section 3 of the Clayton Act.

A. Dentsply has coerced independent tooth dealers to agree not to sell competitive lines of teeth.

286. Dealers selling Trubyte teeth are independent business, selling under their own name and not Dentsply's, and offering thousands of different products that are made by hundreds of different manufacturers. *E.g.*, GX 160 (Zahn's 2001 catalogue); Weinstock Tr.

102 (Zahn carries over 8,000 merchandise and equipment products and 25,000 tooth line items); Vetrano Tr. 1410-11 (DLDS carries 6,000 merchandise products, 35 to 40 “active” brands). They are not Dentsply subsidiaries, nor are they “branded” franchisees as Dentsply’s witnesses apparently believe. *See* Clark Tr. 2583 (“when we recognize a tooth dealer, we’re really branding that tooth dealer now as a player in this tooth market. We’re branding them as that....”). At least one dealer selling Trubyte teeth was founded before Dentsply was in 1899. Harris Tr. 588 (Atlanta Dental founded 130 years ago).

1. Both Dentsply and the dealers selling Trubyte teeth consider Dealer Criterion 6 to be an agreement between them.

287. Dentsply considers Dealer Criterion 6 to be an agreement between Dentsply and dealers selling Trubyte teeth. As acknowledged by Chris Clark, who was Trubyte’s General Manager for many years, a dealer must “agree to the Trubyte dealer criteria” in order to be recognized as an authorized tooth dealer. Clark Tr. 2578. *See also* Cavanaugh Tr. 692-93 (Dentsply executives told Tom Cavanaugh of Frink Dental that he “had an agreement with them that [Frink] would only carry their line”); Jenson Tr. 2296 (Trubyte’s director of sales, when reporting to Trubyte general manager about Zahn’s interest in selling Enigma teeth, referred to dealer criteria as “our current dealer contract”); Jenson Tr. 2297-98 (director of sales, when reporting about Thompson Dental, refers to dealer criteria as “our agreement with [Thompson]”).

288. Dealers consider Dealer Criterion 6 to be an agreement as well.

Nordhauser Tr. 3432 (“I have an agreement, I have an

understanding with Dentsply that I can only sell what I have ... I accept that"); Desautel Tr.

2475-76 (Accu Bite executive wrote "okay" next to Dealer Criterion 6 language on letter

formally recognizing Accu Bite as dealer).

2. Dentsply has actively monitored and coerced compliance with Dealer Criterion 6, and has sought and received assurances of future compliance from dealers.

289. In enforcing Dealer Criterion 6, Dentsply has done more than merely announce its intent to terminate a dealer found to be in violation. It has monitored compliance with the criterion. *E.g.*, Jenson Tr. 2290 (Dentsply monitors Patterson; "Yes. We like to keep tabs on that because they are fairly decentralized and they don't always tell their corporate offices what they are doing"). When a violator is found, Dentsply's practice has been to talk to the dealer, give them an opportunity to comply, and try to persuade the dealer to comply.

Brennan Tr. 1719.

290. That is perhaps best exemplified by the increasing pressure that Dentsply brought to bear upon Frink Dental and its owner Thomas Cavanaugh, which eventually succeeded in convincing Cavanaugh to drop the Ivoclar tooth line.

(a) In 1988, Frink was a dealer selling Trubyte teeth. Cavanaugh Tr. 673. Cavanaugh decided to start selling Ivoclar's teeth because he saw "advantages with the aesthetics of them, anatomical detailing of them." Cavanaugh Tr. 689.

(b) When Dentsply found out about this, it did more than merely notify Cavanaugh of his impending termination as a dealer. Three of Dentsply's high-level executives, including its President Burt Borgelt, flew out to Cavanaugh's Illinois office to talk him out of taking on the Ivoclar tooth line. Cavanaugh Tr. 694-95.

(c) When Cavanaugh went forward with his plan to sell Ivoclar teeth, he was terminated not only as a tooth dealer but as a dealer of Trubyte merchandise as well.

Cavanaugh Tr. 700-01. Dentsply terminated Frink as a merchandise dealer "to make a strong point." Brennan Tr. 1720.

(d) Dentsply then started threatening Cavanaugh with the loss of even more business. Cavanaugh heard from Dentsply's Caulk and Ash Divisions that Dentsply was "very unhappy" with him and that he might be terminated as a dealer from those other divisions as well. Cavanaugh Tr. 708-10. For example, Tim Martin of the Caulk Division, in a conversation with Cavanaugh, "[a]sked how I was doing with the Ivoclar line and suggested that I reweigh the situation because he was hearing from his bosses that they were very unhappy with me and it might affect our relationship." Cavanaugh Tr. 709.

(e) Finally, Cavanaugh relented, dropped the Ivoclar tooth line, and was immediately reinstated as a Trubyte tooth dealer. Cavanaugh Tr. 713-14 (reinstated "from the date we stopped selling Ivoclar").

291. Dentsply also negotiated for over a year with Darby Dental, finally convincing it to drop the Vita tooth stock it acquired as part of its acquisition of DTS.

(a) Darby Dental acquired DTS in 1998. Nordhauser Tr. 4101. As a part of that acquisition, Darby acquired the Vita tooth line that DTS had been selling out of its New York office. Nordhauser Tr. 4104-05.

(b) Dentsply considered Darby's acquisition of this Vita tooth stock to be a violation of Dealer Criterion 6. Jenson Tr. 2289 ("it goes back to the acquiring company, yes"). As Sidney Nordhauser of Darby Dental testified, "[Dentsply] made it very clear, when

we bought DTS, that we cannot promote or give to the rest of our customers Vita teeth. We can only, for a very short period of time, sell it to the customers we have.” Nordhauser Tr. 4106, 4135-37, 4150-51 (“We couldn't promote it because they wanted us to get rid of it.”). Even though Dentsply had earlier permitted DTS to keep the Vita tooth stock in New York, and Darby agreed not to expand the Vita business beyond the customers already buying Vita teeth, Dentsply still insisted that Darby drop the Vita tooth line. Nordhauser Tr. 4139.

(c) Because Darby did not immediately agree to drop the Vita tooth line, lengthy negotiations ensued. Chris Clark and Steve Jenson of Dentsply both met with Sidney Nordhauser of Darby Dental, then had a separate telephone conversation with Darby's Rita Acquafredda. GX 130 at DARBY 001120-21. In a November 5, 1998 follow-up letter to Nordhauser, Clark and Jenson stated that Dentsply “want[ed] to work with Darby” and agreed to give Darby a six-month transition period to work the Vita tooth stock out of the New York location. *Id.* This period lasted more than six months, however, because at the time of Mr. Nordhauser's deposition in December 1999 Darby was still selling Vita teeth. Nordhauser Tr. 4106-07 (“[t]hey said six months, but it's been more than a year, okay?”).

(d) Eventually, Darby complied with Dealer Criterion 6 and dropped the Vita tooth stock in New York. Jenson Tr. 2289-90.

292. Dentsply has also sought and received assurances of future compliance with Dealer Criterion 6 from dealers. In 1993 or 1994, Pearson Dental Supply of Sylmar, California, displayed Vita teeth at its tooth counter after a visit from the local Vident sales rep. Pearson Tr. 1386. When Dentsply found out, it did more than just inform Pearson that it would lose the Trubyte tooth line if it continued to sell Vita teeth. As Keyhan Kashfian, the

president of Pearson Dental testified, "based on the recommendation [of the] representative of Dentsply, we sent them a letter that, you know, we are not going to carry Vita and, therefore, the episode ended by returning the tooth consignment to Vita Company." Pearson Tr. 1387. *See also* GX 93 at DPLY-A 018372 (Dentsply letter to DTS, basing sale of Trubyte teeth on "DTS's acceptance and . . . continued compliance with DENTSPLY Trubyte Dealer Criteria").

3. When recognizing new tooth dealers, Dentsply has explicitly required them to agree to drop some, or all, competing tooth lines.

293. Dentsply cannot seriously dispute that it has entered into agreements with several dealers when first recognizing them as tooth dealers. On several occasions, Dentsply has required dealers to agree expressly to drop some, or all, of their competing tooth lines in order to obtain the Trubyte tooth line in the first place. For example, when recognizing Jan Dental in October 1993, Dentsply required Jan to agree to stop selling Vita, Kenson, Dentorium and Justi teeth. GX 24 at DPLY-A 006262 ("Jan Dental has agreed to carry only Trubyte and Universal tooth brands"); GX 26 at DS 016474 ("Jan currently carries Vita, Kenson, Dentorium and Justi teeth. Per the terms of our agreement, all except for Universal would be eliminated"). *See also* Clark Tr. 2641 ("agreement" between Dentsply and DTS was for DTS to drop Vita, Ivoclar lines in exchange for obtaining Trubyte tooth line); GX 158 at DS 015783 (terms under which DTS was recognized); GX 77 at DS 015927 (Clark recommendation that Dentsply terminate Darby's affiliate Kent Dental "unless Darby agrees to [certain] conditions," including not adding the Vita tooth line); Clark Tr. 2636 (Dentsply did recognize Darby, and Darby did not take on Vita).

B. Dentsply's agreements with dealers selling Trubyte teeth are, as a practical matter, self-perpetuating.

294. The express purpose of Dealer Criterion 6 has been to "tie-up dealers" and to not "free up" the largest dealers selling Trubyte teeth. GX 171 at DPLY-A 004360; Clark Tr. 2608 (GX 171 a "reiteration" of Dealer Criterion 6).

295. The effect of Dealer Criterion 6 has been just that -- to tie up the dealers selling Trubyte teeth and keep them from adding competing tooth lines. Despite the absence of a formal, written contract of specified duration between Dentsply and these dealers, the practical effect of Dealer Criterion 6 has been equivalent to a contract that runs in perpetuity. Despite numerous examples of dealers being interested in taking on a competitive tooth brand, no dealer has yet been willing to give up its Trubyte tooth business in order to do so. Clark Tr. 2631; Pohl Tr. 1907. As Dr. Reitman noted, formal, long-term contracts would have no effect on the market because even without them, there "simply isn't anybody defecting from the Trubyte dealer network." Reitman Tr. 1515.

296. The reason Dealer Criterion 6 is tantamount to a self-perpetuating agreement is that it imposes an "all-or-nothing" choice on dealers selling Trubyte teeth: if a dealer wishes to add the teeth of a competitor, it loses all of its Trubyte tooth business. Reitman Tr. 1514. Because Dentsply has an share of the market, and is than its next-closest competitor in size, Reitman Tr. 1476-77, this itself is a powerful deterrent to taking on a competitive tooth line.

297. There are other deterrents as well. In some instances, Dentsply has also taken away, or threatened to do so, its Trubyte merchandise business from dealers that violated this

policy. Brennan Tr. 1720 (terminated Frink Dental as both a tooth and merchandise dealer); Vetrano Tr. 1426-27 (DLDS threatened with loss of both teeth and merchandise). On at least one occasion, Dentsply refused to accept back the tooth inventory of a dealer that was terminated. Pohl Tr. 1918. *See also* Reitman Tr. 3882-85 (other deterrents include the risk of losing long-term customers with whom the dealer had built relationships; risk of losing other sales along with tooth sales because of one-stop-shopping preference; and transition costs during time period in which dealer attempts to build sales of rival tooth lines).

298. It is not surprising, therefore, that each dealer confronted with this choice has agreed to comply with Dealer Criterion 6. For example:

(a) Frink Dental/Ivoclar. In the late 1980's, Tom Cavanaugh of Frink Dental did take on the Ivoclar tooth line, but did not initially face the loss of his Trubyte tooth business. He contacted other dealers around the country, who agreed to supply him with Trubyte teeth. Cavanaugh Tr. 701-05. Dentsply ultimately found out about this, however, and Cavanaugh's sources of Trubyte teeth dried up. Cavanaugh Tr. 706. At that point, he faced the "all-or-nothing" choice and, after consulting with his sales force, Cavanaugh decided to go back to selling Dentsply teeth. Cavanaugh Tr. 708, 712-13. Although he had increased his sales of Ivoclar teeth, he never expected that those sales would equal his Trubyte tooth sales. Cavanaugh Tr. 711-12.

(b) Zahn Dental/Ivoclar. In the late 1980's, Norm Weinstock of Zahn Dental turned down Ivoclar's offer to sell its teeth because "I couldn't afford to lose the Dentsply line." Weinstock Tr. 153. At the time, Zahn's sales of Dentsply teeth were approximately \$8 million. Weinstock understood that Ivoclar was projecting its own U.S.

tooth sales to be around \$1.2 million. "Obviously, it was an easy decision to say I would rather go and keep my Dentsply line" Weinstock Tr. 152.

(c) Zahn Dental/Heraeus Kulzer.

(d) Zahn Dental/Vita.

(e) Atlanta Dental/Vita. Although Betsy Harris of Atlanta Dental was receiving requests from her lab customers for Vita teeth, she decided not to add the Vita tooth line because her sales of Dentsply teeth represented about 90% of Atlanta Dental's \$1 million tooth revenue. Harris Tr. 615. As Ms. Harris testified, "I had no way of knowing what our Vita sales would be at that time, so losing that much business was — this is my livelihood, this is what I do, and I didn't want to jeopardize my company or myself in that way." Harris Tr. 616.

(f) Pearson Dental/Vita. In 1993 or 1994, Pearson began selling Vita teeth. When Dentsply discovered this, "there was no contest. We were doing a tremendous amount of business with the Trubyte Division"). Kashfian Tr. 1387.

(g) Darby Dental/Vita. When it purchased DTS, at Dentsply's insistence Darby agreed not to promote Vita teeth to any new customers because "Dentsply, as you can see by the numbers, is the major line in this country, okay? It is recognized, well known, it is a good product, okay? I would not jeopardize losing that line to take another line, okay? ... I am not going to take a chance and lose Dentsply to sell Vita teeth or anything else, so we compromised." Nordhauser Tr. 4107.

299. Dentsply's expert, Professor Marvel, has not demonstrated that dealers with smaller shares of the Trubyte tooth business in particular states are good candidates to drop the Trubyte brand and take on one or more competitive brands. Professor Marvel's analysis is based on a dealer's sales within the arbitrary boundaries of state lines. In fact, dealers, particularly small ones, have their sales concentrated in a smaller region than an entire state. Reitman Tr. 3882. He also assumes unreasonably that all of Dentsply's competitors would be willing to sell through the same handful of smaller dealers. Because any manufacturer that tried such a scheme could not service the entire country with so few dealers, it would have to distribute in a "hybrid" fashion, through both dealers and by selling directly. Vident is the only manufacturer that seems willing to practice hybrid distribution. Reitman Tr. 3884-85.

300. As Dr. Reitman aptly summarized near the end of trial, on the question of the length of Dentsply's agreements,

I think the proof is in the pudding. You haven't seen any Dentsply dealers leave Dentsply's business and take on other tooth brands. And the reason is because it doesn't make sense to abandon this. Even if you have a small share of Dentsply teeth, it's a steady share. You know who your customers are and the alternative is the risky prospect of eventually developing a new business with different customers and getting back maybe to where you were before,

maybe not, if we're just talking about Vident, and it's not an attractive proposition to these dealers.

Reitman Tr. 3885.

C. Dentsply's exclusive dealing agreements have foreclosed its closest rivals from approximately 80% of the market.

301. As explained above, Dr. Reitman calculated a foreclosure rate showing that Dentsply has foreclosed its closest competitors from between 78%-87% of the laboratory dealer outlets in the United States. Because a network of lab dealers is necessary to compete effectively in the U.S. market, this is the proper way of measuring a foreclosure rate in this case. PFF ¶¶ 61-167.

D. Dentsply's exclusive dealing agreements have caused substantial anticompetitive effects.

302. There is no dispute that Dentsply possesses at least "substantial market power." Marvel Tr. 3714. *See also* PFF ¶ 168, *et seq.* (proposed findings demonstrating Dentsply's monopoly power).

303. As explained in detail above, Dentsply has exercised its substantial market power in the past 14 years to cause numerous anticompetitive effects in the artificial tooth market. PFF ¶ 263, *et seq.*

VI. Dentsply's alternative explanations for the low market shares of its competitors are not supported by the evidence.

304. To detract attention from the effects of its exclusionary conduct, Dentsply raised a number of other issues allegedly responsible for the failure of its competitors: Vita and Ivoclar sell "European" style teeth not suited to the American market; its competitors have not adequately promoted their teeth, preferring instead to focus their energies on their

more popular crown and bridge products; and the rivals have encountered certain product and service difficulties that have hindered their success. These "other issues" are overstated and do not explain why these competitors have failed to achieve greater success. And Dentsply's own assessment of these competitors, and its continued efforts to exclude them from the dealers, undercuts these arguments. Dentsply still considers Vita and Ivoclar to be its closest competitors, and has worked diligently for at least the past 14 years to block each of its competitors from developing a dealer network. If its competitors were failing because of other, non-dealer-related problems, then Dentsply's exclusionary conduct would be unnecessary.

A. Dentsply overstates the effect of Vita and Ivoclar selling teeth of "European" look and design in the United States market.

305. Dentsply repeatedly pointed to the fact that Vita and Ivoclar sell "European"-style teeth, and attempted to show that was the reason for their failure to do better in the United States market. Dentsply overstates the significance of the differences between Dentsply's teeth and those of Vita and Ivoclar. Indeed, the natural anatomy of its competitors' teeth hold certain advantages.

306. Dentsply overstates the significance of the difficulty Vident and Ivoclar encounter in selling teeth that have a "European" look or design. Despite the differences that do exist, labs convert from using Trubyte to Vita or Ivoclar quite frequently. Miles Tr. 3494. In fact, two of Dentsply's own lab witnesses testified that they increased their use of Vita or Ivoclar teeth very easily, without encountering any resistance from their dentist customers.

(a) Charles Coykendall of the Hopkins Dental Lab in Minnesota began using Ivoclar teeth almost exclusively in his business 17 years ago — long before Ivoclar introduced its more American-style Orthoplane and Ortholingual teeth — because he liked the shading and aesthetics of the teeth better than competing teeth. Coykendall Tr. 3330-31. Prior to switching to Ivoclar, Coykendall was using Trubyte, Swissedent and Kenson teeth. Coykendall Tr. 3317. He was able, “quite easily,” to convince his dentist customers to accept Ivoclar teeth in their denture cases. Coykendall Tr. 3319. He lost none of his customers as a result of the switch. Coykendall Tr. 3319.

(b) Ralph Langer of Langer Dental Arts in Idaho dramatically increased his use of Vita teeth when he hired a tooth department manager who preferred Vita teeth. It was “a fairly immediate turnover. We got very fast into Vita teeth.” Langer Tr. 3259. Prior to that, Langer was using Dentsply teeth 60% of the time, and Ivoclar teeth for the remaining 40%. Langer Tr. 3290-91. Langer encountered no resistance from his dentist customers when he switched to Vita. Langer Tr. 3261 (“not at all”).

307. The natural anatomy of Vita and Ivoclar teeth have certain advantages. Posterior teeth with natural anatomy (i.e., higher cusps) more accurately replicate the way natural teeth chew. Ganley Tr. 1014. Anatomical teeth are also more lifelike and, therefore, more aesthetic. Ganley Tr. 1014, 1111.

308. The use of anatomical teeth is particularly advantageous in partial dentures, where artificial teeth are placed in the mouth next to natural teeth. Ganley Tr. 1015-16; Turner Tr. 406. And this is important because partial dentures are becoming much more

common than full dentures. Clark Tr. 2498 (“we are doing fewer and fewer full dentures ... [and] more and more partial dentures”).

309. Because of these advantages, some labs in the United States market prefer natural anatomy teeth. Miles Tr. 3495 (“yes, certainly some laboratories do prefer [a] European tooth”). Dentsply itself acknowledged this when it introduced its own, European-style posterior teeth, called “Euroline,” in 1999. The Euroline teeth are highly anatomical posterior teeth that have, like the teeth sold by Vita and Ivoclar teeth, higher cusps and more interdigitation. Miles Tr. 3495.

310. To the extent the differences in their teeth have hindered the success of Vita or Ivoclar in the United States market, it is clear that their lack of dealer access has been a much bigger problem. Ganley Tr. 1119-20 (acknowledging other difficulties, but noting that being “locked out” of dealer network is “the largest problem we have in the market”); Whitehill Tr. 398 (Vident would not “have had as many difficulties if we had a better distribution method”).

- B. Dentsply’s competitors have engaged in the same kind of promotion, marketing and training that Dentsply does and, as a percentage of sales, have promoted even more than Dentsply.**

311. Dentsply attempted to show that its competitors, particularly Vident and Ivoclar, have failed not because of their lack of a dealer network but because they have not spent enough money promoting their teeth. But both Vident and Ivoclar engage in the same kind of promotional and training activities that Dentsply does and, as a percentage of their sales, promote even more than Dentsply. *See* PFF ¶ 350, *et seq.*

312. For example, Ivoclar advertises both in dental trade journals and lab journals, provides brochures and other information to labs so they can promote Ivoclar's teeth to dentists, attends trade shows, engages in direct mail advertising, and promotes its teeth to labs through its sales force. Ganley Tr. 985-87; Coykendall Tr. 3332 (Ivoclar markets itself to Hopkins Dental Lab through marketing materials). It offers training programs for dental lab technicians to teach them the proper method and technique to fabricate a denture using Ivoclar's products. Ganley Tr. 986; Coykendall Tr. 3331-32. It provides technical assistance to labs using Ivoclar teeth, either by telephone or in person. Ganley Tr. 986-87. It employs approximately 25 sales representatives who call on dental laboratories and promote Ivoclar's lab products, including its teeth. Ganley Tr. 987. Although they do not call routinely on dentists, Ivoclar still promotes its teeth to dentists through trade journal advertising, by providing promotional materials to labs, and sponsoring seminars conducted by labs for their dentist customers. Ganley Tr. 1106-07.

313. Ivoclar has an outstanding reputation in the industry for its "pull through" marketing efforts. Ganley Tr. 987-88 ("I know we have a good reputation in the marketplace in terms of our capacity and ability to create product demand and pull through products"). According to Richard Mariacher of National Dentex Corporation, the largest chain of dental

labs in the United States, "Ivoclar as a corporation are probably the best marketers in the dental laboratory industry and to the dental profession." Mariacher Tr. 2911-12.

314. Ivoclar has been an innovator in the dental products industry. It began the "Esthetic Revolution," when it introduced its metal-free Empress product. With the introduction of its new Orthoplane and Ortholingual teeth, it has started the "Removable Revolution," and these teeth are superior to others in the market in their ease of use.

Mariacher Tr. 2912.

315. Dentsply executives agreed that Ivoclar has been active in advertising and in supporting its tooth lines. Turner Tr. 404 ("Ivoclar had a very visible trade journal presence overall"). In a June 1995 document, Ronald Zentz of Dentsply's Education Department, wrote that

GX 91 at DPLY-A 053291.

316. Vident, too, engages in the same kind of promotional activities for its teeth as Dentsply.

Vident's 15-16 sales representatives call on dental labs and, where possible, on dentists. Whitehill Tr. 229. The sales force also calls on dental schools "routinely."

Whitehill Tr. 321. Vident also has a telephone sales staff in Brea that sells teeth, particularly in rural areas not covered by the outside sales representatives. Whitehill Tr. 229. It employs certified dental technicians ("CDTs"), as well as a number of other consultants, on staff to provide technical assistance to dental labs using Vita teeth. Whitehill Tr. 228-29.

317. Vident is responsible for the success of the Vita Classical Shade Guide, which is used by approximately of the dentists in the United States. Whitehill Tr. 231-32, 234. It has attempted to leverage the popularity of this shade guide by marketing its teeth in conjunction with it. Whitehill Tr. 228. In 1998, Vita introduced the 3D Master Shade Guide, an innovation that improved upon the Classical Shade Guide by, among other things, increasing the number of shades from 16 to 26. Whitehill Tr. 232-33.

C. Dentsply has encountered more product and service difficulties than have its competitors.

318. Dentsply attempted to elicit evidence about how the teeth of its competitors are less durable, more prone to popping off dentures, and subject to service problems such as backorders. Yet the evidence shows that Dentsply itself has had just as many, if not more, product and service difficulties.

319. It is undisputed that Vita and Ivoclar, like Dentsply, manufacture high-quality teeth. Clark Tr. 2684; Miles Tr. 3494; Ryan Tr. 1230 (premium teeth of Dentsply, Ivoclar, Vita are all high quality); Challoner Tr. 2879 (same); Armstrong Tr. 2386 (Ivoclar Vivadent tooth most natural- and best-looking tooth on the market).

320. While Dentsply tried to establish that its teeth were more durable and wear resistant than others, it failed to do so. The study conducted by Dr. Douglas at the University of Minnesota, apart from the fact that it is hearsay evidence, did not even test Ivoclar's most wear resistant teeth. Clark Tr. 2682-83; Ganley Tr. 984, 1013. Another study that was received into evidence concluded that "no significant difference in wear" existed among competing tooth brands. DX 506. Other evidence is in accord. Langer Tr. 3299 (all premium teeth wear the same); Armstrong Tr. 2378-79 (Vita and Ivoclar use similar material as Dentsply's IPN and are similar in wear resistance).

321. Dentsply has encountered manufacturing problems with its teeth. In August 1996, Holly DeFalco, Dentsply's regional manager in the Northeast, reported that, "[h]istorically, Trubyte has had a problem with flash and/or roughness on IPN teeth. GX 103. This problem existed even on Dentsply's Portrait teeth. Dentsply's own sales force believed that the finish on Dentsply's premium teeth were inferior to the finish on Austenal's Kenson brand, an economy tooth. GX 103; Clark Tr. 2680.

322. Dentsply's IPN teeth have had a debonding problem that have caused them to pop off a denture. To address this problem, Armstrong Laboratory has ground holes in the IPN teeth and applied a chemical agent to the underside of the tooth to prevent it from

popping off. Armstrong has followed a similar procedure not only with Dentsply's IPN teeth, but with the teeth of Ivoclar and Vita as well. Armstrong Tr. 2379-80.

323. Dentsply does not know how the frequency of the product and service complaints it has received compares with those received by its competitors.

324. Dentsply has encountered far more difficulties with "backorder" problems than its competitors. In the early-to-mid 1990's, Dentsply was having a "big back order problem for quite a few years." Cavanaugh Tr. 719. It could not produce teeth fast enough, and they "were having a real big problem. They were back-ordering a lot of teeth [and] upsetting a lot of [Frink Dental's] clients." Cavanaugh Tr. 719. Dentsply had the same problem in 2000. Jenson Tr. 2291. At that time, Marcus Dental in Minnesota took on the Kenson tooth line because of Trubyte's inability to supply it with the teeth it needed. Jenson Tr. 2291 ("Yes. They were unhappy with the service levels"); *see also* Swartout Tr. 1314-15. These problems began in the spring and continued into the fall. Jenson Tr. 2292. From July to August 2000, Trubyte's success rate for fulfilling one-day shipments reached an all-time low, going down from 83.7% to 80.5%. Jenson Tr. 2292.

- D. Despite these “other problems,” Dentsply still views Vita and Ivoclar as its closest competitors and has actively enforced its exclusionary agreements to prevent each of its competitors from developing a dealer network.**

325. Despite all of Dentsply’s efforts to blame Vita’s and Ivoclar’s difficulties on other problems, Dentsply still views them as its primary competitors and focuses its competitive efforts against them. Clark Tr. 2683-84; Miles Tr. 3461, 3494; Jenson Tr. 2249-50.

326. Dentsply’s concern about Vita, Ivoclar, as well as other competitors such as Myerson, is also demonstrated by its vigorous enforcement of Dealer Criterion 6 and its agreements with new dealers requiring them to drop some, or all, of these competitive brands. See PFF ¶ 44, *et seq.*

VII. Dentsply has not established that its alleged business justifications are sufficient to justify its exclusive dealing under Section 2 or under Sections 1 & 3.

327. Dentsply has failed to meet its burden to show that its exclusive dealing practices here are justified by a nonpretextual, procompetitive rationale. Dentsply’s own fact and expert witnesses have provided insufficient evidence to support such a finding.

328. Moreover, Dr. Reitman has conducted a detailed examination of the record to determine whether there are any procompetitive efficiencies from Dentsply’s exclusive dealing policies, and concluded that any procompetitive benefit is negligible. Reitman Tr.

3917-18. In his position as a Justice Department economist, Dr. Reitman typically analyzes the justifications for a firm's conduct in the cases he works on to understand if the conduct has a procompetitive or anticompetitive explanation. Reitman Tr. 3917-18. Here, Dr. Reitman began evaluating Dentsply's claimed justifications when he started working on this case five years ago, three years before receiving Professor Marvel's first report. Reitman Tr. 3918-19. As part of this evaluation, Dr. Reitman reviewed Professor Marvel's justification theory, and concluded that there is no basis for Professor Marvel's opinion that there are procompetitive justifications for Dentsply's policies. Reitman Tr. 3917, 3973; *see also* Reitman Tr. 3880-81. In contrast, Professor Marvel has done no empirical analysis quantifying the effects of removing Dentsply's exclusive dealing policy. Marvel Tr. 3727.

329. When balanced against the demonstrated anticompetitive effects, Dr. Reitman concluded that those anticompetitive effects outweigh any possible procompetitive benefits. Reitman Tr. 1463, 3984-85. Ultimately, Dentsply's exclusive dealing policy results in harm to consumers in the form of higher prices, slower service and frustrated choice in that they do not always get the most suitable artificial tooth brand for a given denture case. Reitman Tr. 1463, 1543, 3917.

A. Dentsply's alleged business justifications are pretextual.

330. As shown above, the contemporaneous evidence is clear that Dentsply's express purpose in enacting and enforcing Dealer Criterion 6 was anticompetitive -- to "block" Dentsply's competitors from the largest, or "key dealers" selling Trubyte teeth by tying up those dealers. PFF ¶ 40.

331. Despite this evidence, Dentsply has put forth a series of purported justifications, both at trial and in its business dealings, that it claims as procompetitive.

However, the evidence shows that these alleged justifications are merely post-hoc rationalizations devoid of support in the contemporaneous record. These pretextual assertions cannot satisfy Dentsply's burden to justify its exclusive dealing policies.

332. One rationale Dentsply has relied on is the need to "focus" its dealers on selling Trubyte teeth. This rationale is most explicitly set forth in an interrogatory response provided during the investigation that preceded the filing of this case:

In Dentsply's experience, the greater the number of competing tooth lines carried, the less likely that a dealer will be able to sustain all of the desired service and promotional elements at a high, competitive level. In short, service and promotional support for a particular line is likely to suffer the greater the number of lines carried. Recognizing the need for dealers to focus their efforts in order to effectively promote the company's teeth and service laboratory customers, the company formalized criteria in February 1993 for dealers to meet in order to be Trubyte teeth dealers. One of these criteria is that dealers that are recognized as authorized distributors of Trubyte teeth cannot add additional lines of teeth after becoming a Trubyte dealer.

GX: 157 at Interrogatory Response No. 13 (p. 12); Reitman Tr. 3923-24.

333. The former Dentsply executive responsible for promulgating the dealer criteria, Robert Brennan, General Manager of the Trubyte Division, also provided this same "focus dealer services" rationale as an explanation for Dealer Criterion 6, stating that it was necessary to ensure that dealers provide an adequate level of service. Brennan Tr. 1719-20. Dentsply recently repeated this rationale in its November 2000 letter to Marcus Dental, in which it threatened Marcus with termination if it did not cease carrying Kenson teeth. Reitman Tr. 3925-27.

334. Dr. Reitman concluded, however, that the “focus dealer services” rationale is not a valid justification for using exclusive dealing in the tooth industry because dealers have every incentive on their own to make sure that their level of service for any given tooth brand does not suffer. Reitman Tr. 3927-28. If a dealer provides inadequate service, it risks losing customers, not only for teeth, but also all the other products the customer may buy from the dealer. Reitman Tr. 3928. In fact, there is much greater risk to the dealer than to Dentsply. If a customer is dissatisfied with the service it receives from one Dentsply dealer, it will simply buy Dentsply teeth from another dealer. Dentsply’s sales will stay the same but the dealer will lose that customer’s business altogether. Reitman Tr. 3928.

335. Testimony from, and the conduct of, Dentsply’s own dealers also corroborates Dr. Reitman’s analysis and undermines Dentsply’s alleged concern over dealer “focus.” Both and Betsy Harris testified that if they added another line of teeth, it would not affect their level of service or the amount of Dentsply teeth they stock. Reitman Tr. 3929.

Harris Tr. 605, 664. Dealers selling the “grandfathered” brands have shown no lack of focus on Trubyte teeth despite the fact that they sell these other products. Vetrano Tr. 1427-28 (DLDS’s addition of the Universal and Justi lines pursuant to the grandfathering provision in Dealer Criterion 6 did not affect its sales of Dentsply teeth); Harris Tr. 664 (fact that Atlanta Dental carries other lines of teeth besides Dentsply does not affect its ability to effectively sell Dentsply teeth); Weinstock Tr. 142 (sale of non-Dentsply teeth has no effect on Zahn’s ability to support Dentsply teeth). Indeed, Dentsply’s own Chris Clark acknowledged that Zahn Dental, which sells Universal, Myerson, and other rival brands, is one of the most effective dealers. Clark Tr. 2685.

336. Moreover, the “focus dealer services” rationale communicated by Dentsply is inconsistent with Professor Marvel’s efficiency rationale articulated in this case. Reitman Tr. 3974. Professor Marvel has not endorsed this particular rationale for exclusive dealing. Reitman Tr. 3929. To the contrary, he stated in his 1982 paper that enhancing dealer services cannot be the justification for exclusive dealing. Reitman Tr. 3929; Marvel Tr. 3704-05.

337. Instead of endorsing the contemporaneous rationale for Dealer Criterion 6, Professor Marvel hypothesized a different rationale. But, to the extent that Professor Marvel claimed to know when and why Dentsply began practicing exclusive dealing, his opinion must be disregarded as inconsistent with the evidentiary record. *See* Marvel Tr. 3632-36 (using timeline to allegedly show that “developments in this marketplace predicted when exclusive dealing would come along and why”). Professor Marvel’s claim is remarkable, in light of the fact that Dentsply executives themselves -- most of whom were at Dentsply when the Dealer Criteria were first put in writing -- claimed not to know when the policy started, why it was adopted, whose idea it was, or whether it was adopted in response to a particular incident. Miles Tr. 3509; Clark Tr. 2629; Pohl Tr. 1902-03. In fact, Dentsply’s counsel failed in her one attempt to elicit testimony from the CEO of her own client about the impetus of the exclusive dealing policy. Miles Tr. 3516-18 (“I’m not sure of it”). Professor Marvel later testified that he did not have an opinion on Dentsply’s motive for adopting exclusive dealing and stated, “I don’t much care about motive.” Marvel Tr. 3686-87.

B. Dentsply has failed to demonstrate that Professor Marvel’s free-riding theory applies to the artificial tooth market.

338. At trial, Dentsply nonetheless put forward Professor Marvel's hypothetical, purportedly procompetitive "free riding" theory for exclusive dealing. However, this theory must be rejected for a number of reasons: (1) Professor Marvel's alleged efficiencies from exclusive dealing are either not dependent on exclusive dealing or are mere speculation; (2) none of the four required elements of Professor Marvel's free riding theory are satisfied here; and (3) Professor Marvel's claimed justification is inconsistent with the behavior of Dentsply's dealers, Dentsply's past enforcement of Dealer Criterion 6, and its behavior with respect to other dental products in the marketplace.

1. Professor Marvel's claimed efficiencies are not dependent on exclusive dealing and are unsupported by the underlying record.

339. Professor Marvel identified three consumer benefits from exclusive dealing. Marvel Tr. 3655, 3657-59.¹⁹ However, two do not depend upon Dentsply's use of exclusive dealing and the third is mere theoretical speculation, not adequately investigated or supported.

340. Professor Marvel claimed two benefits that consumers receive from exclusive dealing: (1) market expansion due to the Denture Opportunity Program, and (2) promotion to dental schools that helps them train their students to fit dentures. Marvel Tr. 3657-58.

However, by the terms of Professor Marvel's own theory, these two benefits do not depend on Dentsply's use of exclusive dealing.

(a) Professor Marvel's efficiency "theory applies to the customers that you have generated for your brand that can be diverted. So it's primarily a theory about branded

¹⁹ When considering efficiencies, Professor Marvel acknowledged that the focus should be on the benefits consumers receive and not on any benefits Dentsply or other suppliers receive. Marvel Tr. 3656.

promotion of artificial teeth.” Marvel Tr. 3554. Branded promotion, according to Professor Marvel, “is promotion that is tied to bring[ing] a customer in to request that particular brand.” Marvel Tr. 3553.

(b) By contrast, general promotion -- intended to expand the market or provide training, such as how to fit teeth -- constitutes nonbranded promotion, to which Professor Marvel’s efficiency theory does not apply. Marvel Tr. 3553-54.²⁰ Thus, exclusive dealing does not protect Dentsply’s efforts to expand the market through convincing patients to replace dentures, such as the Denture Opportunity Program. Marvel Tr. 3553-54, 3562-63, 3573 (identifying the denture opportunity program as nonbranded). *See also* Reitman Tr. 3962-63.

(c) Dentsply’s relevant promotions under Professor Marvel’s theory are those at the laboratory level. Reitman Tr. 3964. As Professor Marvel admitted, “you wouldn’t expect to see exclusive dealing at the dealer level to explain protection of the promotion at the dentist level or at the final consumer level, so if Dentsply were to be promoting there and saying you’ve got to give me the right to have exclusive dealing at the dealer level in order to protect that promotion, I would say that is not an answer, that I would find an explanation that I would find credible.” Marvel Tr. 3698-99. Dentsply does not “need to have recourse to exclusive dealing to be able to retain those customers that its efforts bring to the laboratories.” Marvel Tr. 3699. *See also* Marvel Tr. 3698 (if “free riding” on promotion to dentists and

²⁰ Marvel Tr. 3553, line 25, contains a typographical error. The word “branded” should be “nonbranded.”

patients were a significant problem, Dentsply would need to adopt exclusive dealing at the lab level rather than at the dealer level).

(d) Dentsply engages in nonbranded promotion even though exclusive dealing does not protect these promotional efforts because, to the extent the market expands, Dentsply gets a substantial share of that growth at considerable margins, notwithstanding “free riding” by rivals. Marvel Tr. 3562-63.

(e) Similarly, Professor Marvel testified that “education and training” programs that familiarize people with denture teeth and “make it easier for them to fit dentures” are generally “nonbranded” and thus not protected by exclusive dealing. Marvel Tr. 3554. These are precisely the types of programs that Dentsply sponsors at dental schools. Marvel Tr. 3658 (describing benefits of Dentsply’s promotion to dental schools that “there is somebody out there who is trained in getting you a proper fit” and knows how to select teeth). Thus, these programs are analogous to promotions to dentists and are outside the scope of Professor Marvel’s theory.

341. Professor Marvel’s third claim was that exclusive dealing has allowed Dentsply to introduce premium teeth such as Portrait teeth. Marvel Tr. 3657 (exclusive dealing makes it “possible for a firm to introduce such products and bring them before the ultimate customers by protecting the promotional efforts that the firm makes”), 3658-59 (“Dealer Criterion 6 allows Dentsply to get a return on its promotion, so that it can profitably introduce such new products”).

(a) Professor Marvel’s claim that exclusive dealing was necessary for Dentsply to introduce Portrait and other premium teeth hinges on his conclusion that without

exclusive dealing, Dentsply could not do sufficient branded promotion to introduce new products. Marvel Tr. 3657, 3659. Yet, Professor Marvel offers no support for this conclusion, an omission that is particularly telling given that he did not find "free riding" to have significantly affected nonbranded promotion. Professor Marvel admits that nothing but theoretical expectations support his claim that branded promotion would be reduced. Marvel Tr. 3727 (Professor Marvel has "merely theoretical expectations of what might happen if Dentsply abandoned its exclusive dealing"), 3729.

(b) Professor Marvel has "done no empirical analysis of what would happen if Dentsply abandoned its exclusive dealing." Marvel Tr. 3727; *see also* Marvel Tr. 3729. He ignored a number of opportunities to do more than speculate:

(i) When he reached his opinion, 14 of the 30 dealers that carried Dentsply teeth, including the top 6 dealers, carried other lines of teeth as well. Marvel Tr. 3729-30. Professor Marvel could come up with only a single instance of what he claimed to be actual "free riding" on Dentsply's efforts at an authorized Trubyte dealer -- when Dentsply failed to supply teeth to Marcus Dental in 2000 because of manufacturing problems and Marcus sought to buy teeth from Kenson. Marvel Tr. 3733. That incident, however, did not involve free riding. There is no evidence that the rival manufacturer, Myerson, reduced its promotion by offering Marcus a greater margin than Dentsply, or induced Marcus in any way to steer its customers.

(ii) Many of Dentsply's dealers sell economy teeth, on which Dentsply charges a premium substantially higher than its rivals. Marvel Tr. 3734-35. Professor Marvel agreed that the absence of free riding in economy teeth at Trubyte dealers

would have been a good test for his theory, but only if Dentsply and its rivals had economy teeth of comparable quality. Marvel Tr. 3735-37. But, Professor Marvel chose not to determine whether Dentsply and its rivals had economy teeth of comparable quality. Marvel Tr. 3736-37. Thus, Professor Marvel ignored another opportunity to test his theory.

(iii) Both Universal and Meyerson sold premium teeth through dealers at prices lower than Dentsply's. Marvel Tr. 3737. Professor Marvel looked, but could find no evidence of free riding on Dentsply's promotion of premium teeth. Marvel Tr. 3737-38.

(iv) A Dentsply dealer, DTS, carried both Dentsply and Vita teeth in New York. Marvel Tr. 3738. Professor Marvel did not look to see whether Vita offered DTS a margin difference to switch customers as his theory predicts it should. Marvel Tr. 3741. He conceded that if he had, he would have found evidence to support or refute his theory. Marvel Tr. 3741.

2. The necessary elements of Professor Marvel's free riding theory are not satisfied here.

342. There are four essential elements or conditions which must be satisfied in order for Professor Marvel's theory to apply to any given market. Reitman Tr. 3972-73, 3984. If any one of those conditions are not satisfied, his theory fails. Reitman Tr. 3973, 3984. None of the four necessary elements is satisfied in this case: (1) there is no evidence that dealers engage in "bait and switch" steering of lab customers; (2) Dentsply need not charge a price premium because, using the appropriate measure, it spends less on advertising and promotion than its rivals; (3) most of the relevant promotions by Dentsply are not protectible by

exclusive dealing because they are purely brand-specific and not free-ridable; and (4) Dentsply would increase, not decrease, its spending on promotions and marketing absent Dealer

Criterion 6. Reitman Tr. 3949, 3973. Each of these failures, in and of itself, is fatal to

Professor Marvel's theory here. Reitman Tr. 3973, 3984.

a. **Dealers do not actively "bait and switch" laboratory customers to steer them from one tooth brand carried by the dealer to another.**

(i). **Dealers are more interested in satisfying existing consumer demand and concerned about alienating customers than in actively steering their lab customers from one brand to another.**

343. An "essential element" or "linchpin" of Professor Marvel's efficiency theory is that dealers will try to steer orders for Dentsply teeth to another brand by using a "bait and switch"²¹ strategy on their lab customers. Reitman Tr. 3930-31, 3935, 3946; Marvel Tr. 3548-49. It is not plausible under the facts of this case, however, that dealers would steer labs from one tooth brand to another for several reasons: (1) labs (or sometimes dentists), not dealers, are the decisionmakers who determine what brand of teeth will be used in a particular denture case; (2) there is a significant downside risk to dealers who try to steer customers because if the dealer recommends an alternative brand and the lab does not like it, the dealer might lose the customer's business not only for teeth but also other products. Reitman Tr. 3933; Crane Tr. 1130-31 (little chance a dealer would try to steer customers because of risk that if customer is unhappy with new line of teeth, dealer could lose all of lab's future business); and

²¹ The phrase "bait and switch" was coined by Professor Marvel in describing his theory. DX 1671D; Marvel Tr. 3548.

(3) there is no evidence in the record that, in fact, dealers are steering customers. Reitman Tr. 3931-32.

344. Numerous dealers testified that they do not attempt to steer a lab ordering a particular tooth to order another brand:

(a) DLDS does not attempt to steer customers from one brand of a product to another. Vetrano Tr. 1417, 1419, 1428-29, 1436. The General Manager of DLDS, Regis Vetrano, testified that DLDS could lose customers if it tried to steer a customer to a product that did not work as well as the one the customer preferred. *Id.* at 1417. Moreover, DLDS's sales representatives are not in a position to switch orders from labs because they are not laboratory technicians and do not use the products. *Id.* at 1417, 1437. Mr. Vetrano made clear that his representatives would "have a problem" with him if they tried to substitute teeth. *Id.* at 1428.

(b) At Pearson Dental, the tooth counter specialist responds to "the demand of the customer." Kashfian Tr. at 1384. If a customer calls and orders a particular item, "we don't challenge that. We just process the order." *Id.* Pearson does not "push somebody to buy whatever brand versus [an]other brand" unless "the customer asks for information that . . . he wants to do the change himself." *Id.* at 1391-92. Pearson does not have any influence in determining which brand of teeth will be used in a particular denture -- that decision is made by the lab or the dentist. *Id.* at 1402-03.

(c) Atlanta Dental does not steer its customers to one of the teeth brands that it carries over another. Harris Tr. 663. Ms. Harris sees the decision as the customer's -- she only provides them with her knowledge of different lines, answers questions about the

specific tooth that they are inquiring about and checks on its availability. Harris Tr. 662-63.

In any event, "Primarily, [customers] do know what they want when they call in." Harris Tr. 663-64.

(d) Mr. Nordhauser testified that Darby does not have a hand in choosing the teeth that the laboratory will buy and put into a denture: "We don't do that. The laboratory does that. We can just point out that we have economy teeth and we have regular teeth. So that's as far as we go. We don't in any other way have anything to do with what goes into that denture." Nordhauser Tr. 4143-44.

(e) Zahn does not steer labs from one tooth brand to another. Weinstock Tr. 164-65. On a routine basis, Zahn simply takes orders and "whatever the customer is requesting is what we provide." *Id.* at 103; 143 ("Customer asks for something, we give it to them"). To do otherwise might antagonize its relationship with its vendors.

(f) Jack Silcox testified that, when a lab calls and orders a particular brand of tooth, he does not try to steer them to another brand. Silcox Tr. 2067. Rather, they place their orders and he "give[s] them what they want." *Id.*

(g) Accu Bite earns a margin on its Dentsply tooth lines, except for Desautel Tr. 2468. Despite this margin difference, there is no evidence that Accu Bite steers customers away from Portrait and toward other lines that would earn a higher margin.

345. Dentsply's primary competitors also testified that they do not require or encourage dealers to steer labs.

(a) Vident does not require its dealers, as a condition of selling Vita teeth, to encourage the sale of Vita teeth over a competing brand also carried by that same dealer. Whitehill Tr. 391.

(b) When Frink Dental sold Ivoclar and Trubyte side by side, Ivoclar did not try to induce Frink to switch incoming orders for Trubyte teeth to Ivoclar. Ganley Tr. 1118.

346. Labs agree that dealers do not attempt to determine or influence their choice of brands:

(a) Mr. Obst of DSG testified that his dealer, Zahn, never determines the brand of tooth DSG labs use in their dentures, and that this is true of dealers generally. Obst Tr. 2754. As far as Mr. Obst knows, the dealer isn't even involved in that decision making process in terms of what artificial tooth to use in a particular denture case. Obst Tr. 2754.

(b) Mr. Ryan of Sonshine Dental Lab testified that the dealer is "not involved in picking teeth at all for us." Ryan Tr. 1227. Mr. Ryan testified that DLDS has never tried to persuade him or his lab to switch from the brand of tooth he was planning to buy to another. Ryan Tr. 1227-28. When a dealer is out of stock on something, it calls the lab so the lab can pick a different mould or substitute a different tooth. Ryan Tr. 1227. But in that circumstance, the lab -- and not the dealer -- is the one making the decision about what to substitute to. Ryan Tr. 1227 ("We're the ones that make that decision").

(c) In Dr. Armstrong's 50 years of experience in the dental lab business, he cannot remember a time when a dealer determined what line of teeth would be used by his lab in a denture case. Armstrong Tr. 2387.

(d) Mr. Challoner testified that when his lab orders teeth from the dealer, he already knows which brand he wants and the dealer has no role in determining his choice. Challoner Tr. 2869.

347. During his testimony, Professor Marvel provided several examples of what he claimed were dealers doing the kind of "bait and switch" steering necessary to substantiate his theory. Marvel Tr. 3585-92; DX 1669. However, the record demonstrates that these are not examples of actual steering:

(a) Frink Dental -- First, Mr. Cavanaugh was quite clear in his testimony that what he did was simply give labs a choice to see if they were interested in Ivoclar teeth. Reitman Tr. 3936; Cavanaugh Tr. 683, 690. Professor Marvel concedes that providing a comparison to customers and giving them a choice is not free riding. Marvel Tr. 3693; Reitman Tr. 3936. Second, it is clear that Frink was not trying to steer customers from Trubyte to Ivoclar because Frink's sales data shows that during the time it sold both brands of teeth its sales of Trubyte teeth actually increased over the level of sales when Trubyte was the sole brand Frink carried. Reitman Tr. 3936-37; Cavanaugh Tr. 715 (Frink gained \$75,000 in Dentsply sales during six months he sold Ivoclar), 726; Ganley Tr. 1118 (Ivoclar did not try to induce Frink to switch incoming Dentsply orders over to Ivoclar). Instead, Frink gained additional customers because it gave customers more choices and provided them more products. Reitman Tr. 3937. And in any event, Professor Marvel's theory does not apply to

the Frink episode in the first place because Frink had been terminated by Dentsply and knew it would not be able to sell Dentsply teeth for much longer, so it was going to lose all of its lab customers unless it could convert them to Ivoclar. Reitman Tr. 3937-38. The Frink episode is not an example of "bait and switch" steering between two brands of teeth it carried on an ongoing basis; instead, Frink was not going to be able to sell one brand of teeth any longer and was simply trying to preserve its customers in order to survive. Reitman Tr. 3938.

(b) Zahn Dental - Zahn, too, is not an example of dealer "bait and switch" steering between two brands carried on an ongoing basis. Reitman Tr. 3938. Instead, Zahn traded-out and returned certain lines of Universal teeth from certain locations, and as a result could no longer supply those Universal teeth to its customers. Reitman Tr. 3938; Weinstock Tr. 532-33. Therefore, Zahn attempted to convert its customers from the Universal teeth that were no longer available to Dentsply teeth that it carried. Reitman Tr. 3938-39, 4022-25, 4031-33. According to Professor Marvel, this is not an example of a manufacturer free riding on another. He claimed that the reason Zahn switched its customers was because Trubyte was offering a better product. "If [Universal] had a good tooth that it was promoting regularly," there would not have been a problem. Marvel Tr. 3803.

(c) DTS (I) - Like Zahn, DTS was no longer able to sell Ivoclar or Vita at all in Denver and Kansas City as a result of its agreement with Dentsply authorizing DTS as a Trubyte dealer. Raths Tr. 1159-61; Reitman Tr. 3939. In order to maintain those customers, DTS had to convert them to Dentsply teeth. *Id.* In New York, DTS was permitted to continue selling both Vita and Trubyte. Raths Tr. 1153. However, as Professor Marvel conceded, if any switching of accounts occurred at DTS New York, it was done by Dentsply sales reps, not

DTS reps. Marvel Tr. 3739. There is no evidence that DTS assisted Dentsply in trying to steer its customers. *Id.* at 3739-40.

(d) DLDS - This example was based on Mr. Langer's testimony that his lab made the choice to convert from Vita to Dentsply teeth. Langer emphasized that DLDS does not recommend one brand over another. Reitman Tr. 3939; Langer Tr. 3297-98. Even assuming that DLDS, not Langer Dental Lab, was the impetus for the conversion, this would not be an example of steering because DLDS does not carry Vita teeth. Reitman Tr. 3939-40. Rather, it would be an example of "push" marketing to obtain new teeth sales from labs who would otherwise buy their teeth from another supplier -- not "bait and switch" steering between two tooth brands sold by DLDS. Reitman Tr. 3939-40.

(e) DTS (II) - This is not even an example from the artificial tooth market; instead, it pertains to Tom Underwood's testimony that Ivoclar allegedly asked him to convert customers from the Argen brand of precious metals to Ivoclar.²² Reitman Tr. 3940; Underwood Tr. 3391-92. Even if this request were made, DTS refused to do it. *Id.* The relevant consideration is what dealers actually do, not what a manufacturer expects or requests them to do. Reitman Tr. at 3940. As a result, this is not even an example of "bait and switch" steering in the precious metals market. *Id.*

(f) Darby - Professor Marvel referred to Darby's "opportunity to convert" using its tooth counter. Reitman Tr. 3941; Marvel Tr. 3590-91. Again, the relevant consideration is what dealers actually do, not what they could do, so this example is not

²² And, of course, Mr. Underwood's deposition testimony about what an unidentified Ivoclar representative said to him is inadmissible hearsay.

evidence of steering. Reitman Tr. 3941. To the extent that Darby's sales representatives or telemarketers attempt to obtain new customers for Darby or Dentsply's teeth this is push marketing, not "bait and switch" steering. *Id.*

- (ii). **There is no evidence indicating that Dentsply's non-exclusive tooth dealers have, in the past, actively steered their lab customers from Dentsply teeth to grandfathered rival brands.**

348. If "bait and switch" steering were a valid concern in the artificial tooth market, there should be more examples of it actually occurring, given the presence for at least 25 years of grandfathered brands of rival teeth at dealers carrying Dentsply teeth. Weinstock Tr. 41; Reitman Tr. 3941-42. As mentioned above, Dentsply and Professor Marvel, the proponents of this theory, failed to investigate whether the grandfathered dealers were engaged in steering. Given the 15 years that have passed since the termination of Frink for adding a competing line, it is reasonable to believe that Dentsply, with its extensive sales force, would have gained some knowledge of such steering and reported that to the Court. To the contrary, there are "zero examples" in the record of these dealers steering customers from one brand to another. Reitman Tr. 3943-44, 3946. The dealers selling grandfathered brands who testified at trial and in the deposition record consistently stated that they do not "bait and switch" or steer customers. *Id.*; Weinstock Tr. 103, 164-65; Harris Tr. 662-64; Kashfian Tr. 1384, 1391-92; Vetrano Tr. 1417, 1419. *See also* Langer Tr. 3296-98, 3306-07 (In addition to Dentsply teeth, DLDS sells Justi teeth, an "identical" lower-priced copy of Dentsply's Bioblend tooth, but DLDS has never tried to convert him between brands).

349. The grandfathered brands provide particularly compelling evidence that dealers do not steer customers because, if anything, dealers should be able to steer customers more easily from Dentsply to those brands than to Vita and Ivoclar. Reitman Tr. 3944, 3946. This is because the grandfathered brands include Universal and Myerson, both of which are available in premium lines with American moulds (in fact, copies of Dentsply moulds) and Dentsply shades, all of which is intended to make it easy for labs to switch from one to the other. Reitman Tr. 3944-45. In contrast, Ivoclar and Vita teeth -- which are not among the grandfathered brands -- use largely European moulds and their own shading systems. Reitman Tr. 3945-46; Jenson Tr. 2120-21. Thus, although one would expect to see more switching to Universal and Myerson for these reasons, in reality there has been no steering of lab customers to these brands. Reitman Tr. 3946.

b. Dentsply has failed to show that it spends proportionately more on advertising and sales promotions than its rivals, and therefore needs to charge a price premium.

(i). Dr. Reitman's analysis shows that Dentsply spends less on advertising and promotion than its rivals.

350. The second essential element of Professor Marvel's theory is that Dentsply must charge a price premium greater than that charged by its rivals because it spends more on promotions. Reitman Tr. 3949, 3961-62. Because of this price premium, dealers receive a smaller margin on Dentsply teeth than on its rivals teeth, which in turn creates an incentive for the dealers to engage in "bait and switch" steering of lab customers. *Id.* Dentsply has failed to sustain its burden to show that it spends proportionately more on sales and advertising than

its rivals -- indeed, the evidence shows that Dentsply does not need to charge a price premium because it in fact spends less than its rivals. *Id.*

351. Although Dentsply spends more on promotions than its rivals in absolute terms, because it is times the size of its nearest competitor, the relevant measure is advertising and promotional spending as a proportion of total sales. Reitman Tr. 3950-51, 3961. Professor Marvel applied this measurement in his empirical analysis of the insurance market to test his theory in his 1982 paper. Reitman Tr. 3951-53, 3962.

352. Dr. Reitman calculated Dentsply's promotional expenses as a fraction of its sales in the tooth market using two different variations of Professor Marvel's method: (1) using advertising and promotion expenditures for teeth where available or, where tooth-only expenditures were not available, using advertising and promotions expenditure for all products of the tooth-selling unit or division of the company (GX. 435, 436); and (2) using the number of sales representatives as a proportion of total sales (GX. 437). Reitman Tr. 3953-60. The first variation captures expenditures for advertising in journals, catalogues, producing promotional materials, etc., while the second variation focuses on simply a company's sales force, which Chris Clark testified was the main element of Dentsply's marketing expenditures. Reitman Tr. 3958-59.

353. Dr. Reitman concluded that Dentsply spends less, and in some cases much less, than its competitors on promotions and marketing, even conservatively allocating all the advertising and promotion expenditures of the entire Trubyte Division (which includes many other products such as Lucitone acrylic and Triad) to teeth. Reitman Tr. 3957-58, 3961-62. Similarly, Dentsply's expenditures on its sales force, as a proportion of sales, do not exceed

that of its competitors, and thus would not require charging a price premium. As a result, there is no basis for Dentsply charging a higher price premium than its competitors; if anything, Dentsply should charge less than its rivals, resulting in lower margins for Dentsply, and an incentive for dealers to steer customers from rivals to Dentsply, not the other way around. Reitman Tr. 3957-58, 3961-62. Accordingly, promotional spending does not explain Dentsply's application of exclusive dealing in the tooth market. Reitman Tr. 3962.

(ii). Other evidence in the record confirms that Dentsply has consistently overstated its level of promotion, advertising and dealer investment.

354. Evidence from Dentsply's own employees, as well as its tooth dealers, consistently shows that, over the last decade, the level and effectiveness of Dentsply's promotional, advertising, and educational efforts fall far short of what it claimed at trial.

355. In September 1993, the large labs participating in the Dentsply/York Division Laboratory Advisory Group told Dentsply that it needed to "significantly expand [its] current Education and Speaker's programs to set up a top-notch Dentist effort." DX 389 at DS 005174.

356. In June 1995, Ronald Zentz, the head of Dentsply's Education Department responsible for administering the training programs for labs, wrote:

GX 91 at DPLY-A 053290.

REDACTED

357.

GX 91 at

DPLY-A 053290.

358. The Trubyte Division's Long Range Plan in 1996 again identified

GX 101 at DPLY-A 037306, DPLY-A 037308.

359. These were still areas of concern in the Trubyte Division's 1998 strategic plan:

GX 126 at DPLY-A 046407, 046408. *See also* GX 155 at DPLY-A 107389

360.

361. One of Dentsply's own dealers, Accu Bite, testified that Trubyte's tooth training program is merely "basic." Desautel Tr. 2472. Mr. Desautel believes that his tooth counter manager could probably write the Trubyte tooth training program herself. Desautel Tr. 2473. Accu Bite doesn't use Trubyte's training materials very much. Desautel Tr. 2473. Moreover, there have been occasions where Accu Bite "had some Dentsply representatives call on us, [and] it was obvious they did not know as well their product lines" as Accu Bite did. Desautel Tr. 2474. There have been examples where the local Dentsply tooth rep was not adequately informed or did not have the basic information on some of Trubyte's own promotions. Desautel Tr. 2475. There were even occasions in the past where it got to be "laughable," and got "to the point where it wasn't doing us any good to have that [Trubyte rep] in our tooth counter because they weren't adding any value." Desautel Tr. 2474-75.

362. Mr. Nordhauser of Darby, another Dentsply dealer, testified that Dentsply does not provide any training to any of Darby's personnel in the administration of the tooth counter. Nordhauser Tr. 4143.

363. Dentsply's own dealers do not see Dentsply's promotional efforts bringing in new customers to them.

(a) In the 27 years Mr. Cavanaugh owned Frink, he doesn't remember Trubyte bringing him a new laboratory customer for Trubyte teeth. Cavanaugh Tr. 722-23.

(b) Mr. Desautel does not see Trubyte bringing him new customers. Desautel Tr. 2469-70. There aren't enough Dentsply sales reps to canvass all of Accu Bite's accounts, so Accu Bite's reach is greater than Dentsply's reach. Desautel Tr. 2469-70. In fact, Mr. Desautel does not expect any vendor to obtain new customers for him, because Accu Bite, the dealer, is the one with the customer expertise and the customer relationships. Desautel Tr. 2470.

(c) In Mr. Nordhauser's estimation, Dentsply's sales and promotion efforts do not play a significant role in labs using Dentsply teeth. Nordhauser Tr. 4150. Mr. Nordhauser believes that the customers who purchase Dentsply teeth from Darby are Darby's customers, and not Dentsply's customers. Nordhauser Tr. 4110-11.

(d) Dentsply has brought "very few" customers to Pearson Dental. Kashfian Tr. 1392.

364. Dentsply has overstated its promotional and marketing efforts. As Mr. Desautel testified, compared to all of his other vendors, Trubyte doesn't offer any special services or special pricing or anything that he regards as special in the industry. Desautel Tr.

2479. Trubyte "is essentially harmless and plain vanilla -- they're almost invisible." Desautel Tr. 2479.

(iii). Dentsply's rivals have provided and would provide training and similar assistance to dealers selling their teeth.

365. The record demonstrates that, when given the opportunity to compete through dealers, Dentsply's competitors do not free ride on existing dealer business, but instead actively promote their products to labs and dentists. Apparently, even Dentsply believes that its competitors would work with dealers to promote their teeth, and not free ride on the dealer's efforts. *See* Miles Tr. 3513 ("labs would have to be converted. But between the manufacturer and the dealer, yes, I believe some sales of those competitive teeth would occur and that would impact on my market position")(emphasis added).

366. When Ivoclar sold teeth to Frink, Ivoclar did not free ride on Frink's pre-existing relationships with labs and dentists. Instead, Ivoclar supported Frink's efforts, and created demand for Ivoclar teeth in Frink's Midwestern territory, in a number of ways.

(a) Ivoclar trained Frink's personnel in how to fabricate dentures using Ivoclar teeth. Ganley Tr. 994. Ivoclar also educated Frink on the product features and benefits of Ivoclar's teeth. Ganley Tr. 994; Cavanaugh Tr. 685-86. Mr. Cavanaugh felt that Ivoclar's training was comparable to Dentsply's but that Ivoclar had better promotional materials and samples. Cavanaugh Tr. 716-17.

(b) Ivoclar conducted a "sales blitz" in Frink's territory, by bringing several sales representatives from around the country to the Midwest to cotravel with Frink's sales

personnel and launch the sale of Ivoclar teeth. DX 9 at IVC 023656; Ganley Tr. 994-95; Cavanaugh Tr. 724-25.

(c) Ivoclar continued to advertise its teeth in Frink's sales area. DX 9; Ganley Tr. 1042-43.

(d) Ivoclar did not compete against Frink in the sale of Ivoclar teeth. It granted Frink the exclusive right to sell Ivoclar teeth in its territory, and credited all sales of teeth in that territory to Frink. Ganley Tr. 996.

(e) At Frink's request, Ivoclar changed its credit and exchange policies to match Dentsply's. GX 174.

(f) There is no evidence even suggesting that Tom Cavanaugh, Frink Dental's owner, decided to drop Ivoclar because he was dissatisfied with Ivoclar's product or the level of its support. Ganley Tr. 1000-01. At most, at trial Dentsply proved that Mr. Cavanaugh had some initial concerns at the outset of his relationship with Ivoclar concerning the departure of Ivoclar's president, Kevin Dillon. Ganley Tr. 1046-47.

367. When Ivoclar sold teeth to DTS of Colorado, it supported DTS's efforts and created demand for Ivoclar teeth in that dealer's territory, in a number of ways.

(a) It granted DTS of Colorado a large territory of exclusivity, encompassing all or parts of nine states, in which DTS was the exclusive representative of Ivoclar North America. GX 19 at IVC 024600.

(b) Ivoclar sponsored several seminars by Lee Culp, a well-known ceramist in the United States, for the purpose of introducing Ivoclar's products to the dental lab technicians in the area. Ganley Tr. 1004-05; GX 19 at IVC 024600.

(c) Ivoclar designed, produced, and mailed a direct mail communication to announce the new arrangement with DTS. GX 19 at IVC 024600.

(d) There is no evidence suggesting that DTS of Colorado dropped the Ivoclar tooth line because it was dissatisfied with Ivoclar's product or the level of its support. Ganley Tr. 1006. *See also* Underwood Tr. 3400-01 (DTS's Kansas City branch was satisfied with the quality of Ivoclar's products and the level of marketing support it received; Ivoclar was "very good" at marketing its products).

368. When Vident sold teeth to DTS, Vident did not rely on DTS to create the demand for Vita teeth. Whitehill Tr. 262. Vident supported DTS by training its sales people, cotraveling with them, providing literature, and attending trade shows in DTS's territories. Whitehill Tr. 261-62. In addition, Vident stopped selling directly to labs in DTS's territories, and referred all lab customers wishing to buy Vita teeth to DTS. Whitehill Tr. 260-61.

369. Similarly, when Vident sold teeth to Jan Dental, Vident supported Jan in the same way it supported DTS. Whitehill Tr. 264. Vident did not rely on Jan to create the demand for Vita teeth; that demand was created through Vident's efforts. Whitehill Tr. 264-65.

c. Much of Dentsply's lab-level promotions are not protected by exclusive dealing because they are purely brand specific.

370. The third problem with Professor Marvel's theory is that a great deal of Dentsply's relevant promotion is not free-ridable because it is "purely brand specific" -- *i.e.*, the customer is convinced by the promotion that it wants to buy a particular brand of teeth and a dealer's recommendation will not dissuade them of their brand preference. Reitman Tr.

3965-66. The term “purely brand specific” is derived from Professor Marvel’s 1982 paper describing his theory, where he wrote: “This argument does not apply if the promotional investment is purely brand specific. In such cases, the dealer will not be in a position to switch customers from brand to brand.”²³ Reitman Tr. 3965.

371. One of Dentsply’s purely brand specific promotions is its “add-a drawer” program. Reitman Tr. 3966. The objective of this program is to convince a customer to add additional teeth to an existing stock of Dentsply teeth. Reitman Tr. 3966; Marvel Tr. 3560. If the promotion successfully convinces the lab to expand its inventory of Dentsply teeth, it does not make sense that the lab would be willing, or the dealer would be able to convince the lab, to do so by buying a rival’s brand of teeth instead. Reitman Tr. 3967. Other examples of purely brand specific promotions are Dentsply’s cooperative marketing program, Portrait “sticker” program, Portrait Spectacular program, and competitive tooth swaps. Reitman Tr. 3967-69; Marvel Tr. 3560-62 (describing Portrait Spectacular and coop marketing); Jenson Tr. 2143-44 (describing sticker program), 2169-70 (describing tooth swap program).

372. To the extent Dentsply’s promotions are purely brand specific, they are not free-ridable, and Professor Marvel’s efficiency theory does not apply to them. Reitman Tr. 3969.

²³ In his trial testimony, however, Professor Marvel appeared to reverse course on this issue and testify that exclusive dealing protects branded rather than generic promotion. Marvel Tr. 3554 (“it’s primarily a theory about branded promotion of artificial teeth”); Reitman Tr. 3965. Dr. Reitman did not address whether there might be any branded promotion that is susceptible to free-riding and thus protected by exclusive dealing, only that “purely” brand specific promotion is not susceptible. Reitman Tr. 3965

- d. **Dentsply has not shown that promotion would decrease absent Dealer Criterion 6; indeed, the evidence shows that both Dentsply and its competitors would increase their levels of promotion.**

373. Even if the previous three problems with the application of Professor Marvel's theory to the artificial tooth market did not exist, his theory fails because Dentsply has failed to put forth evidence demonstrating that Dentsply would decrease its level of promotions in the absence of exclusive dealing. *See* Marvel Tr. 3727-28 (Marvel has done no empirical analysis of the effect of removing Dealer Criterion 6 on promotion, and has no firm conclusion on what would actually occur). To the contrary, the evidence shows that Dentsply would in fact increase its level of promotion and marketing, as would Dentsply's competitors. Reitman Tr. 1534-35, 3949. As a result, there would not be an inefficient level of promotion in the market. Reitman Tr. 3969-70.

374. Even assuming Professor Marvel's efficiency theory applied to the tooth market and Dentsply would have an incentive to do less promotion because it could not protect its investment in such promotion, Dentsply would also have a countervailing incentive to do more promotion in order to compete with the strengthened price and non-price competition from its rivals once they gain access to dealers. Reitman Tr. 3970-71; *see also* Reitman Tr. 1534-35. These two effects on Dentsply's promotion level from removing Dealer Criterion 6 must be weighed against each other. Reitman Tr. 3971. The testimony of Dentsply's own executives indicates that, if Dealer Criterion 6 is removed and as a result Dentsply loses market share, Dentsply will likely increase its promotions to regain its share. Reitman Tr. 3971-72; Miles Tr. 3513-14; Jenson Tr. 2309; *see also* Clark Tr. 2688 (Dentsply

worked “even harder” to promote teeth to labs after DTS began carrying Trubyte and Vita side by side in New York). *See also* PFF ¶ 282.

375. If marketing expenditures would increase absent Criterion 6, there can be no concern about an inefficient level of marketing by Dentsply and therefore no procompetitive justification for maintaining Dentsply’s exclusionary policies. Reitman Tr. 3972.

376. The conclusion that Dentsply would compete aggressively even without exclusive dealing is buttressed by its behavior with respect to other Trubyte products that are not protected by exclusive dealing. For example, Dentsply made a point of eliciting testimony from its own executives and lab customers about Trubyte’s new “Eclipse” denture system, which will enable lab technicians to fabricate a denture without using wax. Clark Tr. 2526; Miles Tr. 3458; Jenson Tr. 2131-33; Coykendall Tr. 3324-25. Yet Eclipse is a Trubyte merchandise product, and dealers are not supposed to be terminated as Trubyte merchandise dealers for adding a competitive line of merchandise. Miles Tr. 3509-10. Despite this lack of exclusive dealing protection, Dentsply nonetheless spent the money developing this new product. Miles Tr. 3510.

377. The evidence also shows that Dentsply’s rivals would increase their levels of promotion and marketing if Dealer Criterion 6 were no longer in effect. Various Dentsply competitors have testified that when they determine how to allocate resources, they evaluate how effective the promotional resource will be at increasing sales. Reitman Tr. 1534. When a product is sold through an inferior distribution channel, as here, it is difficult to drive sales through that channel by promoting and marketing. Ganley Tr. 1075; Reitman Tr. 1535. So when a supplier shifts to selling through a preferred distribution

channel, there is a greater likelihood of marketing having an impact and there is more incentive to devote marketing dollars and promotional effort to those products. *Id.* As a result, Dentsply's rivals would increase their promotional expenditures if their teeth were sold through the dental laboratory dealer network. *Id.*; Reitman Tr. 1629; Whitehill Tr. 281-82 (if Vident were able to sell its teeth to a national or regional dealer, it would increase its advertising and promotion of its teeth); Swartout Tr. 1316-19 (in areas where Myerson has better distribution, it invests more in sales and marketing; if it could obtain better distribution in other areas, it would invest more there too).

C. Dentsply's business justification theory is inconsistent with the facts in the marketplace.

378. In addition to the specific areas where Professor Marvel's theory does not apply to the artificial tooth market, Dentsply's asserted justifications for its exclusionary policies are inconsistent with its own announced reason for its exclusionary policies, its conduct enforcing the policy, its rival suppliers' actions, and dealers' behavior in the marketplace. Reitman Tr. 3973-74.

1. Dentsply's justification theory is inconsistent with its dealers' own vehement opposition to exclusive dealing.

379. The rationale for Dentsply's claimed procompetitive justification is that it makes distribution more efficient, resulting in increased profits. But in order to get dealers to cooperate with this distribution restraint, Marvel's theory requires that Dentsply must share its increased profits with the dealers. Reitman Tr. 3974. Thus, in theory exclusive dealing should make dealers "better off" because they get a "share of the pie." Reitman Tr. 3974.

380. Instead of showing support for Dentsply's exclusionary policies in order to receive the benefit of this arrangement, however, dealers vigorously oppose the policy.

Reitman Tr. 3975. Both Ms. Harris of Atlanta Dental and Mr. Weinstock of Zahn Dental voiced the opinion at trial that Dentsply's policies exert too much control over the products they are able to sell. Harris Tr. 593-94 ("I felt that it shouldn't be up to someone else to tell you what you can sell and who you can sell it to"); Weinstock Tr. 157.

381. More strikingly, these dealers have gone so far as to take affirmative action to undermine Dentsply's enforcement of its policy against other dealers. For example, Zahn Dental, Atlanta Dental and many others supported Frink, and put their own relationships with Dentsply at risk, by supplying Frink with Dentsply teeth after it had been terminated as a Trubyte dealer. Reitman Tr. 3975; Cavanaugh Tr. 701-05; Weinstock Tr. 155-57; Harris Tr. 588-94. These dealers sold Trubyte teeth, *at cost*, to Frink in order to show their support for Frink's stand against Dentsply. Weinstock Tr. 156-57 (sold teeth to Frink, a competitor, at cost because Zahn did not want to condone Dentsply's decision to terminate Frink for taking on the Ivoclar tooth line); Harris Tr. 593 (no profit on sales to Frink). If dealers obtained some benefit from the policies because they were in fact procompetitive, there is no reason they would undermine its enforcement. Reitman Tr. 3975.

2. Dentsply's justification theory is inconsistent with its application and enforcement of Dealer Criterion 6.

382. Dr. Reitman provided two examples of Dealer Criterion 6 enforcement that have nothing to do with the purported justifications put forward by Dentsply at trial: Trinity and Leach & Dillon. Reitman Tr. 3975-78.

(a) First, Trinity was a dealer that sold Dentsply merchandise but not teeth, and then added Vita teeth. Reitman Tr. 3975-76; Morgano Tr. 1886. Dentsply had never expressed any dissatisfaction with Trinity as a Trubyte dealer. Morgano Tr. 1887-88. Because Trinity did not carry Dentsply's Trubyte teeth, Dentsply had made no investments in Trinity's tooth sales. *Id.* at 1887-88. Nevertheless, Dentsply terminated Trinity for adding Vita teeth. Professor Marvel's theory does not apply to dealers who do not carry Dentsply teeth, since there are no tooth promotions on which a competitor can free ride in the first place under this scenario. Reitman Tr. 3975-76. Nor is there any reason to believe that preventing Trinity from selling competitive brands of teeth would somehow enhance its ability to sell Trubyte merchandise. Brennan Tr. 1707. Instead, the reason Dentsply terminated Trinity was to try to foreclose a distribution point for Vita. Reitman Tr. 3976.

(b) Second, Leach & Dillon proposed to dealers that they handle only the accounts receivable function for the Davis Schottlander Enigma teeth it was selling.

Jenson Tr. 2296-97; Reitman Tr. 3976-77 The dealers' tooth counters and sales representatives would not be involved in selling the Enigma teeth. *Id.* As a result, Professor Marvel's efficiency story does not apply here because the dealer is not doing any stocking or selling and there is no opportunity to steer customers. Reitman Tr. 3978. Nonetheless, Dentsply considers such an arrangement a violation of the dealer criteria and took steps to put a stop to it. *Id.*; Jenson Tr. 2295-97.

3. Dentsply's justification theory is inconsistent with its own and other suppliers' conduct in the marketplace.

383. Dr. Reitman identified three areas where Dentsply's justification theory is inconsistent with its own or other suppliers' conduct in the dental laboratory products market: (1) no other artificial tooth supplier has imposed exclusive dealing on dealers; (2) neither Dentsply nor any other supplier applies exclusive dealing to any other laboratory products; and (3) Dentsply does not treat its wholly exclusive dealers any differently than its dealers carrying rival brands of teeth under Dealer Criterion 6's grandfathering provision in a way that is consistent with Professor Marvel's theory. Reitman Tr. 3978-79.

a. No other artificial tooth supplier has ever used exclusive dealing.

384. If Professor Marvel's efficiency theory applies to Dentsply, then it should apply to Dentsply's rivals as well. Reitman Tr. 3979. In fact, given that Dentsply's rivals spend more on promotions relative to their sales than Dentsply does, his theory ought to be more applicable to those other tooth suppliers than to Dentsply. *Id.* The evidence in the record, however, demonstrates that no other tooth suppliers use exclusive dealing. *Id.*; Weinstock Tr. 155; Silcox 2066-67. For example, when DTS carried both Vita and Ivoclar teeth in the early to mid-1990s, neither of those firms imposed exclusive dealing to exclude the other. Reitman Tr. 3979.

b. Neither Dentsply nor any other supplier applies exclusive dealing to any other laboratory products.

385. There is no evidence that either Dentsply nor any other supplier has applied exclusive dealing to dental laboratory products other than teeth, such as acrylics, waxes, and related products. Reitman Tr. 3980; Weinstock Tr. 153 (Dentsply does not require exclusive dealing outside of teeth); DiBlasi Tr. 2815-16 (Lincoln has 35,000 products in its catalog,

none of which require exclusivity); Harris Tr. 611-12 (Dentsply does not use exclusive dealing for products other than teeth; no other Atlanta Dental supplier imposes exclusivity); Clavelli Tr. 3335, 3374 (Tri-State sells 150,000 products but none of its suppliers require exclusivity). This is despite the fact that Professor Marvel's theory is more applicable to some of these other products than it is to teeth. Reitman Tr. 3980. For example, Dentsply's Lucitone acrylic is a market leader and flagship product for Dentsply, and Dentsply markets and promotes that product. Jenson Tr. 2129-30. Acrylic is different from teeth in that it is bought in quantity rather than for a particular case and is almost never specified by the dentist in the denture prescription. Reitman Tr. 3980-81. As a result, it would be much easier for a dealer to steer a lab to a rival acrylic because it is not necessary to match moulds and shades from one brand to another. Reitman Tr. 3981. Nonetheless, Dentsply does not use exclusive dealing for acrylic or any other dental laboratory product except for teeth, and neither does any other supplier. *Id.*

c. Dentsply does not treat its wholly exclusive dealers any differently than the nonexclusive dealers carrying grandfathered brands of teeth.

386. Finally, the dealers that sell grandfathered brands of rival teeth in addition to Dentsply teeth are a significant test of Professor Marvel's theory in several ways. Reitman Tr. 3981-82. As noted above, those dealers are where one would expect to see the type of "bait and switch" steering necessary to Professor Marvel's theory if such steering was occurring in the market; however, there are "zero examples" in the record. Reitman Tr. 3982; *see* PFF ¶¶ 348-49. Moreover, there are two other important ways in which these dealers contradict Professor Marvel's theory:

(i) Under Professor Marvel's theory, Dentsply should structure its various marketing programs to devote more resources to its exclusive dealers than to the nonexclusive dealers because Dentsply cannot protect its promotional investments in those dealers carrying grandfathered brands of teeth. Reitman Tr. 2982. There is no evidence in the record, however, that Dentsply devotes more promotional resources to its wholly-exclusive dealers, and in fact, Dentsply executives are very clear that they treat all dealers selling their teeth the same in this respect. *Id.*

(ii) There is no evidence that the nonexclusive dealers carrying grandfathered brands of rival teeth are less efficient than the exclusive Dentsply dealers. Reitman Tr. 3982-83. Again, Dentsply executives could not identify any examples of ways in which non-exclusive dealers were less efficient or less effective than exclusive Dentsply dealers. *Id.*

(i) There is no evidence Dentsply devotes more promotional resources to wholly exclusive Dentsply dealers.

387. Dentsply executives testified that the company does not treat exclusive dealers any differently than grandfathered dealers in the area of promotional support. Miles Tr. 3511-12 (Dentsply treats non-exclusive dealers, such as Zahn, the same as it does exclusive dealers, despite free-riding concerns); Clark Tr. 2686-87 ("level playing field" among all Trubyte dealers); Jenson Tr. 2288-89 (when DTS was carrying both Trubyte and Vita, "[w]e were active with DTS and tried to support them like we would any other dealer"); *see also* Marvel Tr. 3597.

388. When Dentsply has converted a lab from using a competitive tooth to a Trubyte tooth, it has not tried to steer that lab away from buying Trubyte teeth from a non-exclusive dealer such as Zahn, despite Dentsply's perceived risk that the non-exclusive dealer could sell a competing brand to the lab. Clark Tr. 2686-87. Dentsply's commitment not to steer business to one dealer over another is taken very seriously: Chris Clark described it as a "cardinal rule in terms of how we conducted ourselves with dealers that we would not cross." Clark Tr. 2687.

389. Evidence from dealers corroborates Dentsply's behavior: for instance, Dentsply did not alter its level of training, marketing assistance or advertising to DLDS when it started carrying the Universal and Justi lines pursuant to the grandfathering provision in Dealer Criterion 6. Vetrano Tr. 1429.

- (ii) **There is no evidence dealers currently carrying grandfathered brands of rival teeth are less efficient, and in fact the most effective dealers selling Trubyte teeth are dealers such as Zahn and Darby.**

390.

391. Mr. Brennan testified that he knew of no instance in which a grandfathered tooth dealer failed to provide the level of service Dentsply was looking for because they carried a rival manufacturer's teeth. Brennan Tr. 1735.

392. Mr. Clark believed that Zahn was a more effective and “more active” tooth dealer than Patterson, despite the fact that Zahn carries more competitive lines of teeth than Patterson does. Clark Tr. 2685.

393. In a September 15, 1993 letter from Dentsply’s Senior Vice President to Norman Weinstock, Dentsply wrote: “Zahn has been the most aggressive dealer in the U.S. in the tooth marketplace without a doubt.” GX 44 at DS 030646-47.

PROPOSED CONCLUSIONS OF LAW

1. The United States’s Complaint (D.I. 1) in this action seeks to prevent and restrain Dentsply’s continuing violation of Sections 1 and 2 of the Sherman Act, 15 U.S.C. §§ 1 and 2, and Section 3 of the Clayton Act, 15 U.S.C. § 14. The United States alleges that Dentsply’s actions, including its issuance and enforcement of its Dealer Criterion 6, have denied rival tooth manufacturers access to independent tooth dealers and maintained Dentsply’s monopoly in the market for prefabricated artificial teeth sold in the United States.

2. The Court has jurisdiction over this action pursuant to 28 U.S.C. §§ 1331 and 1337, as amended, and under Section 4 of the Sherman Act, 15 U.S.C. § 4, as amended, and Section 15 of the Clayton Act, 15 U.S.C. § 25. Dentsply transacts business in, and is found within, the District of Delaware within the meaning of 15 U.S.C. § 22. Dentsply’s business activities that are the subject of this lawsuit are within the flow of, and substantially affect, interstate trade and commerce.

3. The relevant market for purposes of this case is the sale of prefabricated artificial teeth in the United States. GX 445 at 6-8.

I. The Sherman Act Section 2 Claim

4. Section 2 of the Sherman Act makes illegal the actions of any person “who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States” 15

U.S.C. Sec. 2. Section 2 of the Sherman Act prohibits a firm with monopoly power from maintaining that monopoly power through means that go beyond competition on the merits:

“The offense of monopoly under § 2 of the Sherman Act has two elements: (1) the possession of monopoly power in the relevant market and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident.”

Eastman Kodak Co. v. Image Technical Servs., Inc., 504 U.S. 451, 480 (1992) (quoting United States v. Grinnell Corp., 384 U.S. 563, 570-71 (1966)); United States v. Microsoft Corp., 253 F.3d 34, 50 (D.C. Cir. 2001); Weiss v. York Hosp., 745 F.2d 786, 825 (3d Cir. 1984).

A. Dentsply has monopoly power in the market for prefabricated artificial teeth.

5. To prevail on its Section 2 claim the United States must first establish that Dentsply possesses monopoly power in the relevant market. Monopoly power is “the ability to control price . . . or to exclude or restrict competition.” Weiss, 745 F.2d at 827 n.72 (quoting Grinnell, 384 U.S. at 571). Monopoly power can be established by direct evidence of its control over prices and exclusion of competitors. See Kodak, 504 U.S. at 477. In the Third Circuit, “the size of market share is a primary determinant of whether monopoly power exists.” Pennsylvania Dental Ass’n v. Medical Serv. Ass’n of Pa., 745 F.2d 248, 260 (3d Cir.1984). Monopoly power “may ordinarily be inferred from a predominant share of a

relevant market'." Weiss, 745 F.2d at 827 n.72 (quoting Grinnell, 384 U.S. at 571). Such a high market share "may obviate the need to analyze other pertinent factors." Fineman v. Armstrong World Indus., Inc., 980 F.2d 171, 201 (3d Cir. 1992). Moreover, where it is difficult for other firms to expand or to enter a market, such evidence bolsters the conclusion that a firm possesses monopoly power. See Microsoft, 253 F.2d at 54-55; Fineman, 980 F.2d at 202.

6. Dentsply's market share has consistently remained in the range of 75% to 80% for at least the past 13 years, and such a share has routinely been deemed sufficient to establish monopoly power. See, e.g., Kodak, 504 U.S. at 481 (80%); United States v. E.I. du Pont de Nemours & Co., 351 U.S. 377, 379 (75%) (1956); Int'l Boxing Club v. United States, 358 U.S. 242 (1959) (81%); Am. Tobacco Co. v. United States, 328 U.S. 781, 797 (1946) ("over two-thirds of the entire domestic field of cigarettes"); Houser v. Fox Theatres Management Corp., 845 F.2d 1225, 1229-30 (66%-71%) (3d Cir. 1988).

7. Moreover, Dentsply's foreclosure of rivals from 78%-87% of the dental laboratory dealers in the United States is a significant entry barrier of the kind the antitrust laws condemn. See, e.g., Kodak, 504 U.S. at 485 ("one of the evils prescribed by the antitrust laws is the *creation* of entry barriers to potential competitors") (emphasis added). The lack of effective entry or expansion by any of Dentsply's competitors (or would-be competitors) confirms that Dentsply's exclusionary conduct has been effective and directly reflects

Dentsply's monopoly power.²⁴ See, e.g., Microsoft, 253 F.3d at 51, 58; Fineman, 980 F.2d at 202.

8. In addition, the overwhelming direct evidence of Dentsply's monopoly power, including its ability to thwart consumer choices, control prices and exclude competition, is sufficient by itself to establish Dentsply's monopoly power. See, e.g., Kodak, 504 U.S. at 469; Microsoft, 253 F.3d at 51 (where such evidence exists, "the existence of monopoly power is clear") (citing FTC v. Ind. Fed. of Dentists ("IFD"), 476 U.S. 447, 460-61 (1986)). See also Orson, Inc. v. Miramax Film Corp., 79 F.3d 1358, 1367 (3d Cir.1996) ("Market power — the ability to raise prices above those that would prevail in a competitive market — is essentially a surrogate for detrimental effects.").

B. Dentsply has willfully maintained its monopoly power through anticompetitive conduct.

9. The United States must also prove "the willful acquisition, maintenance, or use of monopoly power by anticompetitive or exclusionary means or for anticompetitive or exclusionary purposes." Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 595-56 (1985); see also Fineman, 980 F.2d at 197; Houser, 845 F.2d at 1230. In determining whether Dentsply's conduct is exclusionary, the effect of its conduct on consumers and competition should be considered. See Aspen, 472 U.S. at 605. A monopolist's conduct is unlawful where, as here, it "tends to impair the opportunities of rivals [and] either does not

²⁴No evidence establishes that any entry or expansion is likely to be meaningful. For entry or expansion to be meaningful, it must occur on a scale sufficient to curb Dentsply's monopoly power. See, e.g., Rebel Oil Co. v. Atlantic Richfield Co., 51 F.3d 1421, 1440 (9th Cir. 1995). Such entry must also be timely. See Microsoft, 253 F.3d at 57. Neither expansion by existing firms nor any recent entry has undermined Dentsply's price leadership.

further competition on the merits or does so in an unnecessarily restrictive way.” Id. at 605 n.32.

10. “In Section 2 cases, the wrongful act is usually one designed to exclude competitors from the market (e.g., . . . exclusive dealing).” Fraser v. Major League Soccer, L.L.C., 284 F.3d 47, 61 (1st Cir. 2002).²⁵ A monopolist violates Section 2 if it “maintain[s] monopoly [power] by means of those restraints of trade which are cognizable under [Sherman Act] § 1.” Griffith, 334 U.S. at 106; Barry Wright Corp. v. ITT Grinnell Corp., 724 F.2d. 227, 239 (1st Cir. 1983). Accordingly, the analysis under Section 2 is similar to the rule of reason analysis under Section 1 (Microsoft, 253 F.3d at 59), with the important caveat that “[w]here a defendant maintains substantial market power, his activities are examined through a special lens: Behavior that might otherwise not be of concern to the antitrust laws — or that might even be viewed as procompetitive — can take on exclusionary connotations when practiced by a monopolist.” Kodak, 504 U.S. at 488 (Scalia, J., dissenting) (citing 3 P. Areeda & D. Turner, Antitrust Law ¶ 813, at 300-02 (1978)); see also Ocean State Physicians Health Plan, Inc. v. Blue Cross & Blue Shield of Rhode Island, 883 F.2d 1101, 1112 (1st Cir. 1989). A monopolist’s conduct will be condemned as exclusionary where it has an anticompetitive effect. See Kodak, 504 U.S. at 469, 483; Microsoft, 253 F.3d at 58.

11. Here, foreclosure is substantial and reflects Dentsply’s monopoly power. Complete 100% foreclosure is not required for exclusionary conduct to be anticompetitive. See Tampa Electric Co. v. Nashville Coal Co., 365 U.S. 320 (1961) (“substantial share”);

²⁵See also Microsoft, 253 F.3d at 58, 60; Lorain Journal Co. v. United States, 342 U.S. 143, 155 (1951); 3M v. Appleton Papers, Inc., 35 F. Supp.2d 1138, 1145-46 (D. Minn. 1999).

Lorain Journal, 342 U.S. at 152-53 (no need to prove monopolist “completely eliminated” rival). See also Microsoft, 253 F.3d at 70-71, 73-74 (explicitly rejecting a requirement of complete foreclosure and finding Section 2 violation based on 15% foreclosure of one important distribution channel for Internet browsers). Foreclosure of a significant share of a distribution channel can be anticompetitive if the channel is important for effective competition. See, e.g., Microsoft, 253 F.3d at 70-71; Conwood Co. L.P. v. United States Tobacco Co., 290 F.3d 768, 787-88 (6th Cir. 2002) (upholding monopolization claim where defendant excluded competition in the moist snuff market through elimination of substantial number of rival sales racks and point of sale advertising, important distribution and advertising avenues).

12. The technically “at-will” nature of Dentsply’s dealer criterion does not make mitigate the substantial level of foreclosure present here. Whether Dentsply’s Dealer Criterion 6 violates Section 2 turns on its competitive effect, because “the Sherman Act . . . is aimed at substance rather than form.” Copperweld Corp. v. Independence Tube Corp., 467 U.S. 752, 760 (1984); see also Kodak, 504 U.S. 478-79 (rejecting suggested “legal presumption” inconsistent with the facts). An assessment of competitive effects of exclusive dealing must consider the “competitive context of the industry” and “the relative strength of the parties.” American Motor Inns, Inc. v. Holiday Inns, Inc., 521 F.2d 1230, 1252 (3d cir. 1975) (quoting Tampa Electric, 365 U.S. at 329). Moreover, direct evidence of adverse effects confirms that Dentsply’s conduct is anticompetitive, see supra, and that its conduct is exclusionary. See Brown Univ. v. United States, 5 F.3d 658, 668 (3d Cir. 1993) (citing IFD, 476 U.S. at 460-61).

13. Finally, Dentsply's exclusionary intent is both abundantly clear and directly "relevant to the question whether the challenged conduct is fairly characterized as 'exclusionary' or 'anticompetitive.'" Aspen Skiing, 472 U.S. at 602; Chicago Bd. of Trade v. United States, 246 U.S. 231, 238 (1918). While it is not necessary to prove intent, "knowledge of intent may help the court to interpret facts and to predict consequences." Microsoft, 253 F.3d at 59. The *express purpose* of Dealer Criterion 6 was anticompetitive. Thus, Dentsply's conduct violates Section 2.

II. The Sherman Act Section 1 and Clayton Act Section 3 Claims

14. Section 1 of the Sherman Act makes illegal "[e]very contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States . . ." 15 U.S.C. Sec. 1. Clayton Act Section 3 provides, in relevant part, as follows:

It shall be unlawful for any person engaged in commerce, in the course of such commerce, to . . . make a sale or contract for sale of goods . . . for use, consumption or resale within the United States . . . on the condition, agreement, or understanding that the lessee or purchaser thereof shall not use or deal in the goods . . . of a competitor or competitors of the lessor or seller, where the effect of such . . . sale, or contract for sale or such condition, agreement, or understanding may be to substantially lessen competition or tend to create a monopoly in any line of commerce.

15 U.S.C. Sec. 15.

15. The agreement elements of Sections 1 and 3 are easily satisfied here. In all other respects, the evidence establishing Dentsply's violation of Section 2 also establishes Dentsply's violation of Sections 1 and 3. Indeed, because "significant market power is enough to trigger Section 1's rule of reason approach" and "something less than monopoly power is required . . .

under . . . [the] ‘substantially lessen competition’ test” of the Clayton Act (Fraser, 284 F.3d at 60), the existence of monopoly power here makes plain that Dentsply’s conduct is anticompetitive under either provision. See Brown Univ., 5 F.3d at 668 (“courts typically allow proof of the defendant’s ‘market power’ instead” of proof of actual “market effects”). Even absent the compelling evidence of Dentsply’s monopoly power here, the very high degree of foreclosure and the direct evidence of resulting anticompetitive effects establish that Dentsply’s exclusive agreements violate Sections 1 and 3. See id. at 668-69 (because “[m]arket power . . . is essentially a ‘surrogate for detrimental effects,’ . . . plaintiff may satisfy [its] burden by showing actual anticompetitive effects”) (quoting IFD, 476 U.S. at 460- 61 (quoting Areeda ¶ 1511 at 429)); see also Microsoft, 253 F.3d at 70.

A. Dentsply’s exclusionary agreements with artificial tooth dealers are agreements within the meaning of Sections 1 and 3.

16. The United States has demonstrated that the restrictive conditions under which Dentsply sells teeth to its dealers constitute agreements under the antitrust laws. Such an agreement can be either express or implied, and can be established by direct or circumstantial evidence, including evidence of a course of conduct. See United States v. General Motors Corp., 384 U.S. 127, 142-43 (1966) (“it has long been settled that explicit agreement is not a necessary part of a Sherman Act conspiracy”); United States v. Parke-Davis & Co., 362 U.S. 29, 44 (1960); Alvord-Polk, Inc. v. F. Schumacher & Co., 37 F.3d 996, 1000 (1010-13 (3d Cir. 1994). It is not necessary that each of parties share the same motive, so long as the agreement produces an anticompetitive effect. See Parke-Davis, 362 U.S. at 45; Fineman, 980 F.2d at 213. An agreement exists “[w]hen [a] manufacturer’s actions . . . go beyond mere announcement of his

policy and the simple refusal to deal, and he employs other means which effect adherence” Parke-Davis, 362 U.S. at 44; see also Monsanto Co. v. Spray-Rite Service Corp., 465 U.S. 752, 765-66 (1984). An announced policy, accompanied by threats of termination, active surveillance, and reinstatement conditioned on assurances of future compliance, is sufficient to establish an agreement. See Parke-Davis, 362 U.S. at 44; see also Monsanto, 465 U.S. at 765-66.

17. Dentsply has gone beyond a mere announcement of its dealer criteria and its intent to terminate violators. It actively monitored compliance and, when it detected a violation, it engaged in individualized negotiations with the dealer to obtain compliance. The extensive evidence of individualized negotiations, threats of termination, and assurances of compliance easily satisfies the agreement element.

B. Dentsply’s exclusive dealing agreements have unreasonably restrained competition.

18. Under Section 1, a “rule of reason” analysis applies to those restraints that are not *per se* illegal. See Angelico v. Lehigh Valley Hosp., Inc., 184 F.3d 268, 275 n.3 (3d Cir. 1999). “Proof of anticompetitive effect is the hallmark of a rule of reason test.” See Big Apple BMW, Inc. v. BMW of N. Am., Inc., 974 F.2d 1358, 1376 n.13 (3d Cir. 1992) (citing Tunis Bros. Co., Inc. v. Ford Motor Co., 952 F.2d 715 (3d Cir. 1991)).²⁶ The rule of reason requires the fact-finder to “weigh [] all of the circumstances of a case in deciding whether a restrictive practice should be prohibited as imposing an unreasonable restraint on competition.” Brown, 5 F.3d at 668 (quoting Continental T.V., Inc. v. GTE Sylvania Inc., 433 U.S. 36, 49 (1977)). “The

²⁶Because, if anything, Section 3 of the Clayton Act requires a lesser showing of anticompetitive effects than Section 1 (Town Sound & Custom Tops, Inc. v. Chrysler Motors Corp., 959 F.2d 468, 487 (3d Cir. 1992); Barr Laboratories, Inc. v. Abbott Laboratories, 978 F.2d 98, 110 (3d Cir. 1992)), anticompetitive conduct that violates Section 1 also violates Section 3.

plaintiff bears an initial burden under the rule of reason of showing that the alleged combination or agreement produced adverse, anti-competitive effects within the relevant product and geographic markets.” *Id.* (citing *Tunis Bros.*, 952 F.2d at 722). “The plaintiff may satisfy this burden by proving the existence of actual anticompetitive effects, such as reduction of output, . . . increase in price, or deterioration in quality of goods or services.” *Id.* (citing *IFD*, 476 U.S. at 460-61; *Tunis Bros.*, 952 F.2d at 728). Alternatively, a plaintiff may satisfy its burden by proving market power as a “surrogate” for effects. *Id.* Accordingly, proof of either market power *or* actual anticompetitive effects can, independently, establish a violation of Section 1. *See id.*

19. As discussed above, where challenged conduct involves exclusive dealing the foreclosure rate is also relevant to whether there are “likely” or “probable” adverse effects. Courts have “routinely condemned” foreclosure of 40%-50% of the market to rival firms, and where there is substantial market power, the foreclosure showing can be far less for conduct to be deemed anticompetitive. *See supra*. Dentsply’s conduct has foreclosed a far-higher percentage of the market than 50%. Dentsply’s monopoly power and substantial foreclosure of competition point to “likely” and “probable” serious competitive harm. In many cases, that evidence alone would suffice as a “surrogate” for actual adverse effects. *See Brown*, 5 F.3d at 668-69. As discussed, however, here there is *direct* evidence of anticompetitive effects. Accordingly, Dentsply has violated Section 1 and Section 3. *See id.*

III. Dentsply’s Alleged Business Justifications

20. Given the evidence of substantial anticompetitive effects resulting from Dentsply’s exclusionary conduct, Dentsply has the burden under both the Sherman Act and the

Clayton Act to show that its conduct “promotes a sufficiently procompetitive objective.” Brown Univ., 5 F.3d at 669; see also Tampa Electric, 365 U.S. at 329; Microsoft, 253 F.3d at 59. Even if Dentsply can meet its burden of showing both that its claimed justification is non-pretextual and sufficiently procompetitive, such a showing is rebutted by the evidence “that the restraint is not reasonably necessary to achieve the stated objective.” Brown, 5 F.3d at 669.

A. Dentsply has the burden of showing that its exclusionary conduct promotes a sufficiently procompetitive objective.

21. Dentsply must show not only that its exclusionary policies have procompetitive benefits, but also that those benefits are valid and sufficient. Kodak, 504 U.S. at 483. Under a rule of reason analysis, the evidence of Dentsply’s supra-competitive prices and exclusion of competition places upon Dentsply “a heavy burden of establishing an affirmative defense which competitively justifies this apparent deviation from the operations of a free market.”²⁷ NCAA v. Bd. of Regents, 468 U.S. 85, 113 (1984). Dentsply’s justification must be a “non-pretextual claim that its conduct is indeed a form of competition on the merits because it involves, for example, greater efficiency or enhanced consumer appeal.” Microsoft, 253 F.3d at 59.

1. Dentsply has failed to demonstrate that its alleged business justifications are non-pretextual.

22. Dentsply has failed to demonstrate that its claimed business justification is non-pretextual. See Microsoft, 253 F.3d at 59. Inconsistencies and contrasts between internal and public explanations of a policy support the conclusion that claimed justifications are pretextual. Alvord-Polk, 37 F.3d at 1010-13. That is the case here, where the evidence “makes it less likely

²⁷The defendant bears the burden of persuasion for an affirmative defense. See, e.g., Hughes v. United States, 263 F.3d 272, 278 (3d Cir. 2001).

that the free rider problem was really uppermost in the minds of defendants' executives."

Brokers' Assistant, Inc. v. Williams Real Estate Co., 646 F. Supp. 1110, 1120 n.38 (S.D.N.Y.

1986). Dentsply's claim that it maintains these exclusionary policies in order to "focus [dealer] efforts in order to effectively promote the company's teeth and service laboratory customers" is

inconsistent both with the contemporaneous evidence that what was "uppermost" in the minds of

Dentsply's executives was an intent to "block competitive distribution points" and with Professor

Marvel's efficiency theory. Moreover, Dentsply's enforcement of its exclusive dealing policies

and its conduct in the marketplace for teeth and other products also is inconsistent with Dr.

Marvel's theory. The evidence thus demonstrates that Dentsply's claimed business justification

is pretextual, and Dentsply accordingly has failed to meet its threshold burden. See Alvord-

Polk, 37 F.3d at 1012; United States v. VISA U.S.A., Inc., 163 F. Supp. 2d 322, 400-02

(S.D.N.Y. 2001).

2. Dentsply has failed to demonstrate that its alleged business justifications are procompetitive.

23. Dentsply also has failed to demonstrate that it has a "valid business reasons" for its exclusionary policies. Kodak, 504 U.S. at 483 (citing Aspen, 472 U.S. at 605). Dentsply

must prove that "it was in fact pursuing its goals as a rational economic actor and [can] justify its conduct by reference to rational, procompetitive economic principles." Flegal v. Christian Hosp.,

4 F.3d 682, 688 n.4 (8th Cir. 1993). Such a showing must consist of more than unsupported

assertions, id., and the asserted justifications must be more than theoretical or speculative.

"Merely offering a rationale for a restraint will not suffice; the record must support a finding that

the restraint in fact is necessary to enhance competition and does indeed have a procompetitive effect.” Graphic Prods. Distribs., Inc. v. ITEK Corp., 717 F.2d 1560, 1576 (11th Cir. 1983).

24. The evidence from Dentsply’s own fact and expert witnesses establishes that any procompetitive benefit from Dentsply’s exclusive dealing policies is negligible. Professor Marvel’s theory does not apply to promotion to dentists and consumers, and Dentsply does not need exclusive dealing at the dealer level to protect this type of promotion. See VISA, 163 F. Supp. 2d at 404 (where there is “no asset on which free-riding could occur” exclusionary policies are unnecessary). Professor Marvel’s remaining efficiency claim is based merely on theoretical expectations, not empirical analysis, and it is not supported by the facts.²⁸ Where there is no evidence of the harm the exclusionary policies are alleged to protect against -- here, dealer steering -- defendant’s procompetitive justifications are not persuasive. See VISA, 163 F. Supp. 2d at 403-04. And where, as here, defendant’s economic expert offers no empirical analysis to support his position, his opinion is “based on a cursory examination of the facts,” and his testimony is “belied by the uncontradicted record evidence,” his justifications do not withstand scrutiny. See VISA, 163 F. Supp. 2d at 402.

25. Moreover, to meet its burden of demonstrating procompetitive effects, Dentsply must show that from the “totality of circumstances, [its] articulated procompetitive rationale is consistent with [its] overall conduct.” Flegal, 4 F.3d at 688 n.4. Dentsply, however, has not applied exclusive dealing to dental laboratory products other than teeth, such as acrylics, waxes,

²⁸The evidence does not establish that (1) dealers will actively “bait and switch” laboratory customers to steer them from one tooth brand carried by the dealer to another; (2) that Dentsply spends more on promotions than its rivals; or (3) that Dentsply’s promotions are general in nature and not mostly brand specific (brand specific promotions not being susceptible to steering and free riding).

and related products, despite the fact that Professor Marvel's theory is more applicable to some of these other products, such as Dentsply's Lucitone acrylic.²⁹ In addition, Dentsply's claimed justification is flatly inconsistent with its policy to treat its non-exclusive dealers carrying grandfathered brands of teeth the same as its wholly exclusive dealers.

B. The evidence establishes that Dentsply's exclusionary arrangements are overbroad and not reasonably necessary to achieve the stated objective of protecting its promotions.

26. Even if Dentsply showed that its justifications are non-pretextual and procompetitive, such proof would be rebutted by the evidence showing that the restraint is overbroad and "not reasonably necessary to achieve the stated objective." Brown Univ., 5 F.3d at 669. Even setting aside the numerous problems discussed above with applying Professor Marvel's theory to the artificial tooth market, his theory fails because Dentsply has failed to put forth evidence demonstrating that it would decrease its level of promotions in the absence of exclusive dealing. To the contrary, Dentsply's own executives testified that, if Dealer Criterion 6 is removed and as a result Dentsply loses market share, Dentsply will likely increase its promotions to regain its share. Moreover, Dentsply's rivals would increase their own levels of promotion and marketing if Dealer Criterion 6 were no longer in effect. As a result, the overall level of interbrand promotional efforts market wide -- the relevant consideration under Professor Marvel's theory -- would increase, and thus Dentsply's restrictive agreements are overbroad and not reasonably necessary to achieve the stated objective. See Brown, 5 F.3d at 669.

²⁹No other supplier has applied exclusive dealing in either the dental laboratory products market or more specifically in the artificial tooth market. If, according to Dr. Marvel's theory, it is efficient for Dentsply to apply exclusive dealing to teeth, it should be efficient for Dentsply's rivals as well.

C. The substantial evidence of anticompetitive effects outweighs any procompetitive benefit.

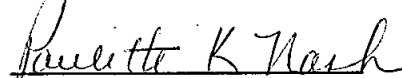
27. Even if the Dentsply's claimed business justification were not pretextual and were sufficiently procompetitive, any benefit from that justification is negligible and is far outweighed by the substantial anticompetitive harm resulting from Dentsply's exclusionary policies. Brown Univ., 5 F.3d at 669; Law v. NCAA, 134 F.3d 1010, 1019 (10th Cir. 1998) (citing Brown Univ.) ("ultimately, if these steps are met, the harms and benefits must be weighed against each other in order to judge whether the challenged behavior is, on balance, reasonable"); Microsoft, 253 F.3d at 59. Courts routinely apply a similar "rule of reason" balancing approach under both Section 1 and Section 2. Id. (citing Standard Oil Co. v. United States, 221 U.S. 1, 61-62 (1911)).

28. For all of the reasons discussed, Dentsply's conduct has caused significant anticompetitive harm in the market: frustrated consumer choice, higher prices, and inferior quality and service. On the other side of the balance, any procompetitive benefits of Dentsply's conduct are negligible. Accordingly, the anticompetitive harm far outweighs any procompetitive benefits, and Dentsply's conduct is thus a violation of Section 2 and of Sections 1 and 3.

Respectfully submitted,

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Dated: July 19, 2002

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

UNITED STATES OF AMERICA,

Plaintiff,

v.

DENTSPLY INTERNATIONAL, INC.,

Defendant.

Civil Action No. 99-005-SLR

AFFIDAVIT OF SERVICE

I, **Maureen R. Davis**, an employee in the Office of the United States Attorney for the District of Delaware, hereby attest under penalty of perjury that on **October 29, 2003**, a copy of the foregoing

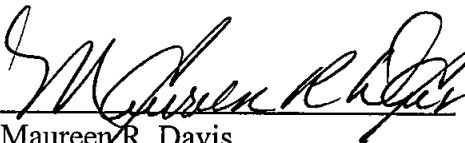
**UNITED STATES' PROPOSED FINDINGS OF FACT
AND CONCLUSIONS OF LAW**

was served via hand-delivery upon counsel at the following address:

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An Additional copy of the above document will be hand delivered on **October 30, 2003**, by Jonathan Jacobs, Trial Attorney, Antitrust Division, U.S. Department of Justice, Health Care Task Force, Liberty Place Building, 325 Seventh Street, N.W., Suite 400, Washington, DC 20530, to:

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